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Review of the genus *Parosus* Sharp, 1887 (Coleoptera: Staphylinidae, Oxytelinae)

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Review of the genus *Parosus* Sharp, 1887 (Coleoptera: Staphylinidae, Oxytelinae). - The tropical Central and South American genus *Parosus* Sharp, 1887 is reviewed. Adults are most frequently found in forest litter or collected from narrow spaces between sappy plant parts. The three earlier named species are redescribed with the most distinctive of the still unnamed taxa added to this account. Lectotypes are designated for *P. hilaris* Sharp and *P. skalitzkyi* Bernhauer. Seventeen new taxa are described in this paper: *P. bicoloratus* sp. nov. (Ecuador: Pichincha), *P. brasilianus* sp. nov. (Brazil: São Paulo), *P. campbelli* sp. nov. (Ecuador: Napo), *P. colombiensis* sp. nov. (Colombia: Magdalena, Ecuador: Napo), *P. gigantulus* sp. nov. (Colombia: Magdalena), *P. hermani* sp. nov. (Ecuador: Cotopaxi, Pichincha), *P. longicornis* sp. nov. (Peru: Junín), *P. longipennis* sp. nov. (Bolivia: Cochabamba, Peru: Cuzco), *P. major* sp. nov. (Peru: Cuzco, Bolivia: La Paz, Cochabamba, Santa Cruz), *P. minutus* sp. nov. (Panama: Panamá), *P. newtoni* sp. nov. (Panama: Bocas del Toro, Panamá), *P. portobelo* sp. nov. (Costa Rica: Colon, Coclé, Puntarenas, Panama: Heredia), *P. rossii* sp. nov. (Costa Rica: Cotopaxi), *P. simplex* sp. nov. (Peru: Cuzco), *P. taliaferroae* sp. nov. (Panama: Coclé, Bocas del Toro, Chiriquí), *P. thayerae* sp. nov. (Peru: Huánuco), *P. unicoloratus* sp. nov. (Brazil: São Paulo). The diagnostic characters are illustrated for all species and a key is presented for well-developed specimens.

Keywords: Neotropics - Cloud forests - Atlantic forests - *Parosus* - key - lectotypes - new species.

INTRODUCTION

The genus *Parosus* is known from the tropical areas of Central and South America. Adults can be found on foliage and in forest litter (particularly that of palm trees) and are inhabitants of Cloud forests and Atlantic forests, their habitats endangered. While it is clear that they are not subcortical (were never encountered in such habitat by specialists) they were recorded from narrow spaces in between plant parts (e.g. under bract, at node of palm frond), where they perhaps have mode of life similar to those of corticolous species. An affinity is suggested by the remarkably flattened body built of most species. Sometimes specimens are found in light or flight intercept traps, too. The relationships of the genus are controversial. Larvae are unknown.

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The superficial appearances of most species are similar and the male genitalia are also rather alike, with just one or two exceptions. As a general guideline for the present work, only those species are treated where adequate material is available for the description (at least one male) and the species can be distinguished by external and internal features of well-developed (male) specimens. All others – where a male is not available or the distinction of the species is not possible based on the studied material – are left undescribed for the time being. Possibly the internal sclerites of male aedeagi could be used for the separation of these closely allied and therefore problematic taxa (e.g. Makranczy, 2013), but such a study would require more material (especially as the sclerites are mostly weakly sclerotized, not conspicuous), instead of the few solitary specimens at our disposal today. Most of the descriptions presented here are largely based on these males (holotypes) rather than the whole type series (some exceptions are noted in the text). Only of two species there was abundant material available. These two series indicated a beyond average variability in terms of external traits and their developments. On the other hand, the male aedeagus has proved to be quite stable in its characters, even between strikingly different looking specimens.

It is difficult to know what a well-developed specimen (large male or 'major' male are terms frequently used in related genera) is with only one or a couple of specimens at hand. These usually have much broader temples (and often the ratio of the eye length compared to the enlarged temple is smaller). Females cannot be separated from males without dissection, in fact some females can even be larger than a well-developed male. It means that a large female can be readily identified, while there is no key in the world that could separate the abnormally small specimens by external traits alone. A small male could still be identified by comparison of its aedeagus. Females have no significant differences in their genital traits. Spermathecae look almost the same even for obviously distantly related species. As a general rule, all specimens that could be safely identified with a taxon are included in the material (as paratypes, or as 'other' if their conditions did not allow them to become type). Measurements and the key are for the best developed (largest) specimens (there might be a few females among them), while the descriptions themselves are mostly based on the male holotype (some exceptions are noted in the text).

Specimens of *Parosus* are rather rare in collections. Taking into account the known distribution range and the rather specialized habitats in which specimens are found, it is not surprising that the amount of the available material of this genus is small. In fact, one third of the species dealt with here are known by 3 or less specimens.

MATERIAL AND METHODS

The material used in this study comes predominantly from recent decades, yet most are from times when GPS units were not available for recording geographical coordinates. Every effort was made to pin down these locations on maps as precisely as possible, but of course, these calculated data will never be as precise or trustworthy as GPS measured coordinates. The label data of the historical type specimens are reproduced verbatim in quotation marks “ ” with "\" as a separator between each individual label and ";" between lines and additional information pertaining to data or localities provided in square brackets [ ]. For holotypes of the here described species

the original label data are faithfully reproduced but not literally, not line-by-line. Geographical coordinates are given for each different locality, but the calculated ones (provided in square brackets) have to be taken with caution.

Abbreviations of collections used in the present study are:

AMNH American Museum of Natural History, New York, NY, USA
BMNH The Natural History Museum, London, United Kingdom
CNCI Canadian National Collection of Insects, Ottawa, ON, Canada
FMNH Field Museum of Natural History, Chicago, IL, USA
FSCA Florida State Collection of Arthropods, Gainesville, FL, USA
HNHM Hungarian Natural History Museum, Budapest, Hungary
ICNC Instituto de Ciencias Naturales de la Universidad Nacional de Colombia, Bogotá, Colombia
ISNB Institut Royal des Sciences Naturelles de Belgique, Brussels, Belgium
MHNG Muséum d'histoire naturelle, Geneva, Switzerland
MNHP Muséum National d'Histoire Naturelle, Paris, France
NHMW Naturhistorisches Museum Wien, Vienna, Austria
QCAZ Museo de la Pontificia Universidad Catolica del Ecuador, Quito, Ecuador
SEMC Snow Entomological Collection, University of Kansas, Lawrence, KS, USA
SMNS Staatliches Museum für Naturkunde, Stuttgart, Germany
USNM National Museum of Natural History (Smithsonian I.), Washington DC, USA
ZMHB Museum für Naturkunde der Humboldt Universität, Berlin, Germany

Codes used for the measurements: HW = head width with eyes; TW = head width at temples; PW = maximum width of pronotum; SW = approximate width of elytra at shoulders; MW = approximate maximum width of elytra; AW = maximum width of abdomen; HL = head length from front margin of clypeus to the beginning of neck (the line connecting posterior ends of temples); EL = eye length; FL = faceted eye length; TL = length of temple; PL = length of pronotum in the middle-line; SL = length of elytra from shoulder; SC = length of elytra from hind apex of scutellum; FB = fore-body length (combined length of head, pronotum and elytra); BL = approximate body length. All measured from dorsal view.

Carrying out the traditional measurements presented some difficulties. Elytra are significantly wider at the hind part (MW) than at the shoulders, where measurements are usually made. Eyes in the genus are often modified to not form (as usual) a full spherical calotte, but leaving (in dorsal view) a triangular area without facets; therefore the (dorsal view) measurement of the eye length require a supplemental figure (FL) that refers to the approximate length of the faceted area. Since the well-developed specimens look very different from the less developed ones, only the former were measured; it has to be taken into account that much smaller specimens might exist for all species, but their inclusion in the measurements would hide the real differences between the well-developed ones.

For descriptions and measurements a Leica MZ 12.5 stereoscopic microscope was used. For the line drawings permanent preparations were made in Euparal mounting medium on plastic cards pinned with the specimens or on regular micro -

scopic slides with cover glasses. The preparation techniques for these are described in detail in Makranczy (2006). Drawing was done with an Olympus BH-2 or a Jenalab (Carl Zeiss, Jena) compound microscope and drawing tubes (camera lucida). The Scanning Electron Micrographs (SEM) of gold+palladium coated objects were taken with a LEO1550 Field Emission Scanning Electron Microscope, other images of uncoated specimens with a Hitachi S-2600 N Scanning Electron Microscope. For the colour habitus photographs a Leica DFC 490 camera was attached to a Leica MZ16 stereoscopic microscope and layers montaged with AutoMontage.

For surface sculpture features Harris (1979) is consulted. The very characteristic punctation type seen on the dorsal surface of *Parosus* is sometimes referred to in literature as "foveolate" (e.g. Harris, 1979), but by convention and consultation with English speaking colleagues the term "umbilicate" is used throughout. As the punctures on the vertex and pronotal disc are generally very dense, there is not much use in following the tradition of giving the approximate ratios of the puncture diameters vs. puncture interspaces as a diagnostic feature. The roughness/density of punctation is thereby characterized by the approximate number of longitudinal rows on the dorsal surface of the head. It must be noted that this is somewhat illusory as there are no such 'longitudinal' rows; but if there were perfectly straight puncture rows, approximately that many would fit in. The Scanning Electron Micrographs (SEM) presented here depict certain traits well, but for example microsculpture is displayed poorly. This has to be considered when comparing the images with the verbal descriptions (made with regular light microscopy).

TAXONOMY

KEY TO THE KNOWN *PAROSUS* SPECIES

In the early drafts of this paper no identification key was presented. The primary reason was the likely vast number of still undescribed which renders this effort almost useless. Why it was still decided to be valuable is that (in the absence of a phylogeny) it gives the genus a structure and also an idea on what characters might be useful in distinguishing the species. Besides key couplets, diagnostic information is also given for each species under "Comparative notes".

The use of the presence/absence of a medially deeply serrate hind margin of tergite VII as a primary diagnostic character separates obviously closely related species and places them in very different points of the key. While the taxonomic value of this character is somewhat unsure, its use was still considered desirable as it was such an easy-to-observe feature.

Throughout the key much difficulty was experienced with the secondary sexual differences in the head shape, as it made problematic to separate both the males and females of not even the most closely related taxa by unambiguous characters, although the major males of these species could be distinguished rather easily. Consequently the key works with satisfactory results only if well-developed specimens (males) are available.

1a Fimbriate hind margin of tergite VII may form an angle (190-200°) medially, but otherwise simple, without modifications 2

1b Fimbriate hind margin of tergite VII medially deeply serrate with several digitiform processes 5

2a Temples sharply narrowing behind eye, head and pronotum so coarsely punctured that only about 18 'longitudinal' puncture rows fit on the whole breadth on head and pronotum, clypeus fully punctured, head (vertex) and pronotum (disc) very convex [Peru: Huánuco] . *P. thayerae* sp. nov.

2b Temples slightly broadening behind eye, head and pronotum still coarsely punctured but with smaller punctures, so about 26 'longitudinal' puncture rows fit on them, clypeus unpunctured, head (vertex) and pronotum (disc) never unambiguously convex 3

3a Head reddish medium brown (body same, except shoulders and basal tergites often lighter, yellowish), pronotal disc with two shallow longitudinal depressions along the elevated, shiny posterior midline, these, however, do not modify the predominantly convex appearance of the dorsal surface of the pronotum [Peru: Cuzco] . . . . . *P. simplex* sp. nov.

3b Head dark brown to blackish (contrasting bright orangeish pronotum and light basal tergites), pronotal disc with broad depressions surround the elevated, shiny posterior midline, these depressions cover most of the pronotal disc 4

4a Abdomen darkened on tergites V-VI, mid-antennal segments about as long as broad [Panamá: Coclé, Chiriquí, Panama, Canal Zone] . . . . . *P. taliaferroae* sp. nov.

4b Abdomen darkened on tergites VII-VIII, mid-antennal segments slightly elongate [Ecuador: Pichincha] . . . . . *P. bicoloratus* sp. nov.

5a Temples behind the eye (at least on a distance equal to the eye length) either dilated, or run parallel (but in this case not at a least bit curving inwards) 6

5b Temples behind eye narrowing or at least within short distance start curving inwards 11

6a Medium-large species (pronotal width 0.50-0.75 mm), strikingly bicoloured (yellowish-reddish pronotum, shoulders, abdominal base) 7

6b Very large species (pronotal width 0.80-1.00 mm), without such contrasting colours 8

7a Dark body with striking orangeish pronotum. Abdomen base lighter, but no obvious, delimited cross-stripe. Loosely punctured area of vertex not reaching neck: posterior 1/4 with similar punctation to that of sides. [Costa Rica] . . . . . *P. rossii* sp. nov.

7b Shoulders and surrounding area light (yellow), abdomen light, with darker tergites V-VI forming cross-stripe. Posterior 1/4 of vertex slightly more loosely punctured than sides of head. [Costa Rica, Panamá, Venezuela] . . . . . *P. hilaris* Sharp

8a Antennae elongate, mid-antennal articles about twice as long as wide (Fig. 22) [Peru: Junín] . . . . . *P. longicornis* sp. nov.

8b Mid-antennal articles not more than 1.5 times longer than wide 9

9a Head with much finer umbilicate punctation (more than 30 'longitudinal' puncture rows). Shoulders lighter than rest of elytra [Brazil, São Paulo] . . . . . *P. unicoloratus* sp. nov.

9b Head with more rough umbilicate punctation (30 or less 'longitudinal' puncture rows). Shoulders with colour similar to the rest of elytra 10

10a Punctation behind clypeus almost as dense as in posterior part of vertex. Elytra usually lighter (reddish-brownish) than head and pronotum [Peru, Bolivia] . . . . . *P. major* sp. nov.

10b Punctation behind clypeus (anterior vertex) gets very sparse. Colour of the elytra much closer to that of the head and pronotum [Colombia: Magdalena] . . . . . *P. gigantulus* sp. nov.

11a Head so coarsely but sparsely punctured, that a maximum of 14-16 'longitudinal' puncture rows fit the width of the head 12

11b Head with finer and more dense punctation, so that a minimum of 18, but usually 20-24 'longitudinal' puncture rows fit the width of the head 13

12a Head (with eyes) much narrower than elytra (at its broadest – hind – part). A very shiny species [Ecuador: Pichincha] . . . . . *P. hermani* sp. nov.

12b Head (with eyes) much broader than elytra (at its broadest – hind – part). A rather shiny species, punctation on the elytra characteristically indistinct and its surface a little dull [Ecuador: Napo] . . . . *P. campbelli* sp. nov.

13a Elytra with indistinct punctation very different from that of the head; stair-like transversal formation across the middle of pronutum [Lesser Antilles/West Indies: Grenada, St. Vincent] . . . . . *P. skalitzkyi* Bernhauer

13b Elytra with distinct punctation (may differ in size from that of the head); no transversal formation across the middle of pronotum 14

14a Eyes fit perfectly in the curve of the temples, with the postocular process filling this curve [Panamá: Panamá, Bocas del Toro] . . . . . *P. newtoni* sp. nov.

14b Eyes do not fit perfectly in the curve of the temples, postocular process not so well developed 15

15a 'Unicoloured' dark species, larger (pronotal width 0.55-0.60 mm) 16

15b 'Bicoloured' species, smaller (pronotal width around or less than 0.55 mm) 17

16a Temples much longer than the eye length and always characteristically angled [Colombia: Magdalena, Ecuador: Napo] . . . . . *P. colombiensis* sp. nov.

16b Temples not much longer than the eye length and broadly rounded [Antilles: Guadeloupe, Trinidad & Tobago, Venezuela: Aragua] . . . . . *P. antillarum* Wendeler

17a The smallest of all species (pronotal width less than 0.40 mm), pronotum not much lighter than head, never reddish-yellowish [Panamá: Panamá] . . . . . *P. minutus* sp. nov.

17b Larger species (pronotal width 0.40-0.55 mm), pronotum much lighter than head, reddish-yellowish 18

18a Eyes not bulging, head with strongly developed postocular process [Brazil: São Paulo] . . . . . *P. brasilianus* sp. nov.

18b Eyes bulging, head with very weakly developed postocular process 19

19a Shoulders not yellowish, antennae more elongate (middle antennomeres in Fig. 24) [Costa Rica, Panamá] . . . . . *P. portobelo* sp. nov.

19b Shoulders yellowish, antennae more stout (middle antennomeres in Fig. 23) [Bolivia: Cochabamba, Peru: Cuzco] . . . . . *P. longipennis* sp. nov.

***Parosus* Sharp, 1887**

Parosus Sharp, 1887: 704; type species: *Parosus hilaris* Sharp, 1887 (by monotypy).

DIAGNOSIS: *Parosus* can be recognized by the medially broadly and deeply incised labrum and unusually strong umbilicate cephalic and pronotal punctation. Members of the genus can be distinguished from the most closely related genera by a three-segmented tarsus, unmodified sternite VIII in both sexes, reverse trapezoid pronotum without marginal bead and in most species (except only 4 of the named) a medially deeply serrate fringe on the posterior margin of tergite VII, a comb-like formation with several large incisions (Figs 27-31).

DESCRIPTION: Medium-sized (2.0-5.3 mm). Body strongly depressed, moderately densely pubescent. Specimens usually either 'bicoloured' or 'unicoloured' (these colouration types are referred to in the descriptions). When abdomen light coloured, hind margin (keel) of tergal fold on tergites III-VI-(VII) with a darker line. Head usually larger than pronotum, latter much broader apically than basally. Umbilicate punctation most prominent on head and pronotum, but punctation almost always strong on elytra as well. Abdominal segments mostly shiny with indistinct punctation.

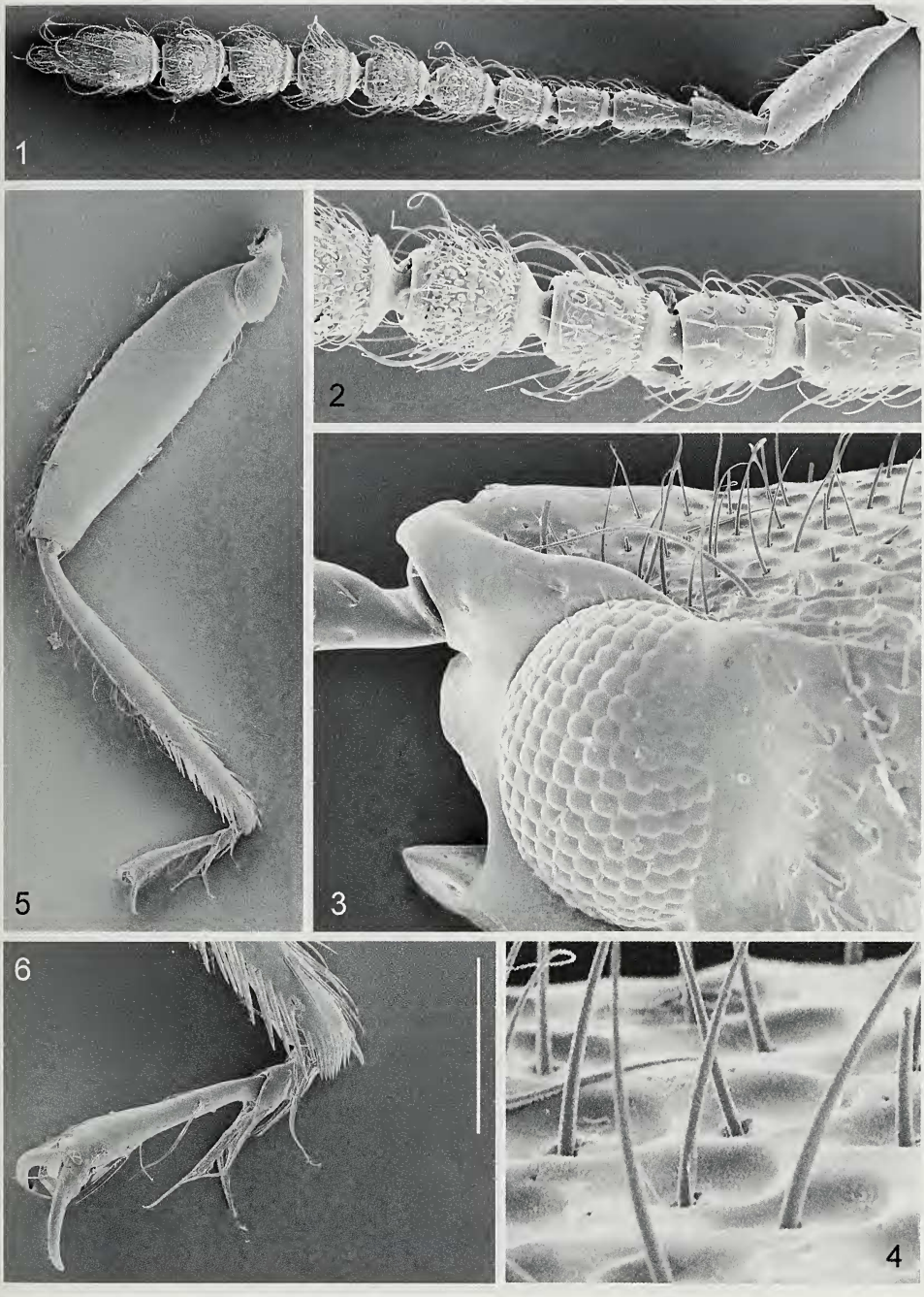
Head. Clypeus in most cases recognizable as a shiny, almost unpunctured area, poorly delimited by obsolete epistomal groove (feeble, broad, arcuate depression). Dorsum of head with strong umbilicate punctation (Fig. 4). Supraantennal prominence generally well developed and a ridge (hypostomal suture?) leads to the upper edge of the eyes, in some species even running further posteriorly above the side of the head (temples, gena). Distance of supraantennal prominence and eye variable, sometimes very small, in other cases rather long. Spherical calotte of eye (Fig. 3) not fully occupied by facets, its hind part, a broader or thinner slice without facets, sclerotized, often continuing in a triangular projection posteriorly (hereafter referred to as post-ocular process). (This feature makes giving traditional measurements for the specimens somewhat difficult.) Gular sutures confluent anteriorly, sutures gradually divergent posteriorly from middle; near base sutures strongly divergent. Dorsum of head usually with a shallow medial/longitudinal impression connecting epistomal and occipital impressions. Punctation generally more sparse towards middle of vertex, lateral areas (especially near eyes) microsculptured interfering with punctation. Base of head slightly to strongly constricted to form well-defined/broad neck, but without distinct occipital groove (obsolete; evident as broad, arcuate depression). Antenna (Fig. 1) slightly incrassate apically, length of segment 1 almost equal to length of articles 2-3 together, basal dish (Fig. 2) from antennomere 4 onwards quite prominent, sculpture from article 5 onwards strong. Compound eyes vary in size and appearance: from rather small (less than 1/4 length of temples) to rather large (length almost equal to length of temples); often they bulge, but in some species fitting into the arch of temples. Median portion of labrum bearing a U-shaped deep emargination with strongly sclerotized border and two small teeth on anterior margin, emargination often broadly rounded at base (Fig. 18) but sometimes only narrowly rounded (Fig. 97). Lateral portions bearing large membranous lobes. Anterior lateral edge (laterad of emargination) less sclerotized, rather truncate. Mandibles (Figs 9-10) denticulate with

four teeth, first three following each other at equal distances, fourth separated by rounded emargination and itself rather round. Prostheca extending from inner edge, about half as long as mandible itself, composed of rather long and weak processes. In maxilla, cardo very small, transversally elongate triangular, lacinia enlarged with basal lobe, galea relatively smaller, both with moderately dense setation on apex. Maxillary palpus (Fig. 7) with first segment very small and ringlike, second and third segments rather large, with apex broadening and about equal in size and shape, fourth segment (Fig. 8) slender and acicular, length about half of second or third segment. In labium (Fig. 11), mentum (Fig. 17) trapezoid. Hypopharynx (Fig. 12) laterally with row of bulbous setae, some at midline also. One lobe with spinelike setae. Coronal pegs (sensillum basiconicum) (Fig. 13) scattered on disc of hypopharynx and a few at middle near apical edge. Labial palps (Fig. 15) three segmented, each segment about the same in length, but with width only about 3/4 the width of the previous segment. Third segment with a couple of very short sensillae on tip. Second segment with one coronal peg at apex, first segment with a few also at its apex. Platelike armature in hypopharynx as in Fig. 16.

Thorax. Prosternal process pointed, scutellum without pubescence, hypomera not exposing protrochantins. Pronotum with reverse trapezoid shape, sides strongly convergent from middle to base, posterior edge margined. Posterior part of pronotal midline usually appearing as elevated shiny stripe. Disc with umbilicate punctation. – Legs. Tibia (Fig. 5) with mid-tibial spur(s) and spines or rows of stiff setae. Tarsal segmentation 3-3-3 (Fig. 6) with no pseudosegment. Ventral setae modified to form tarsal lobes, last tarsomere only with sparse setae. – Elytra. Elytra without distinct puncture-rows, elytral suture parallel, epipleural ridge present.

Abdomen. Abdomen with two pairs of laterosclerites. Intersegmental membrane without brickwall pattern. Second sternite fully developed, first sternite completely absent. Tergal basolateral ridges absent, carina not present on any sternites. Fimbriate edge on tergite VII either modified medially (see under species treatments) or unmodified (in a minority of the known taxa). Sternites VII-VIII lacking peculiar modifications in both sexes. Tergite X (Fig. 21) with oblique desclerotized lines (suggesting precursor state to "rhomboid fusion" but basolateral parts still not fused to tergite IX), dorsal struts not developed, formation the same in both sexes.

Secondary sexual characters. With a slight expression of macrocephaly (mostly a great variability among individuals, rather than a real difference between sexes). – Male terminalia. Sternite IX (Fig. 20) present, with setae on apex. Tergite IX (Fig. 19) with small, slender ventral strut. – Male genitalia. Aedeagus median lobe bulb-like, internal sclerites present but weakly sclerotized, inconspicuous, symmetrical/paired. Apical opening simplified, truncate. Median face membranous, without apicomedial hook. Parameres not wrapping, without extra lobe or membranous region, with only one strong bristle on each. Without visible pump and flagellum. – Female terminalia. Tergite IX (Fig. 32) with only a trace of a ventral strut. Female genital appendages (Fig. 33) divided into coxites, valvifers but no styli. – Female genitalia. Spermatheca (Figs 34-36) sclerotized. Receptacle divided, not associated with visible spermathecal gland, tubular portion not penetrating distal bulb, umbilicus absent.



FIGS 1-6

Parosus gigantulus sp. n.; left antenna (1), antennomeres 4-6 (2), left eye (3), punctures on dorsal head surface (4), metaleg (5), metatarsus (6). Scale bar = 0.03 mm for 4, 0.12 mm for 3, 0.15 mm for 2, 0.17 mm for 6, 0.3 mm for 1, 0.4 mm for 5.

DIVERSITY: The genus has previously stood with 3 described species. Based on the examined material it looks likely that the real diversity could be at least double of the number of species treated here (i.e. upwards of 40 species). Considering the rapid destruction of the Neotropical forests and the primary wooded habitats in general, it is possible that many species go extinct without ever being discovered.

DISTRIBUTION: *Parosus* is a montane Neotropical genus: in Central America it occurs south of Nicaragua, in the West Indies south of Puerto Rico, in South America only present in the tropical areas. Southernmost occurences: Peru, Bolivia, Brazil (Estado de São Paulo).

NATURAL HISTORY: Not much is known about the bionomics of most species, collecting methods for half of the species are unrecorded. Many of the specimens are captured in flight intercept traps or window traps, some collected in litter or by beating branches. The information gathered so far suggests that at least some species actually live in foliage.

Parosus antillarum Wendeler, 1928 Figs 40, 52-55

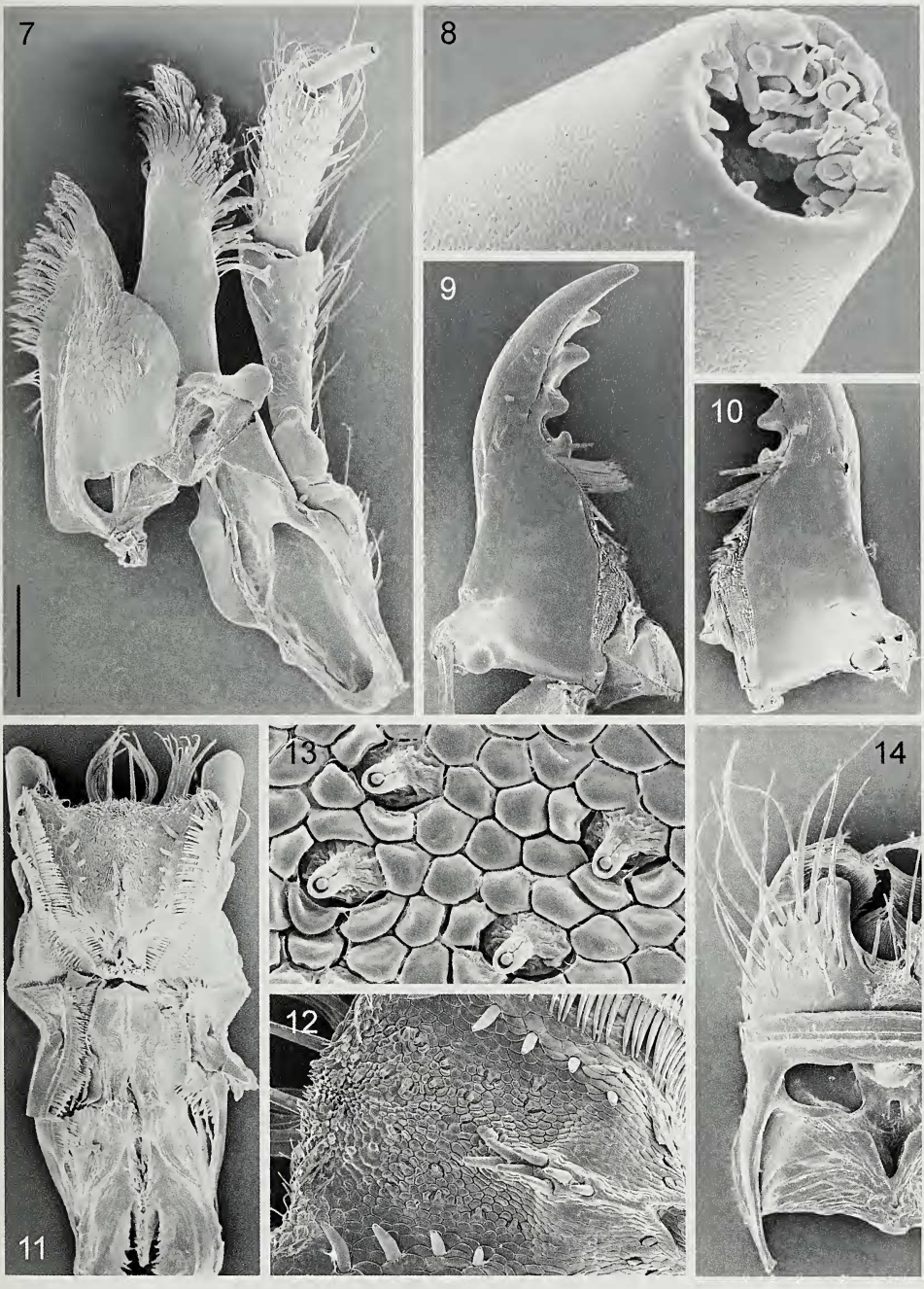
Parosus antillarum Wendeler, 1928: 33. – Blackwelder, 1943: 104. – Herman, 1970: 400.
Parosus antillarus: Herman, 2001: 1463.

TYPE MATERIAL EXAMINED: HOLOTYPE (♀), "Trois Rivières; (Guadeloupe); Dufau \ Parosus; antillarum; Fvl. \ Parosus; antillarum n.sp.; Wendeler det. \ Holotypus \ antillarum x; Wdlr. \ Holotypus; Parosus; antillarum Wendeler; ver. Makranczy, 2000 \ Parosus; antillarum Wendeler; det. Makranczy, 2000" (ZMHB).

OTHER MATERIAL: FRENCH ANTILLES: Guadeloupe [15°58'N, 61°38'W], leg. Plason (coll. Bernhauer, FMNH, 1). – TOBAGO: 10km NE Roxborough, Gilpin Trail, montane rain forest [11°18'N, 60°33'W], 400-500m, 26-31.VI.1993, leg. S. & J. Peck (#93-50), flight intercept trap (FMNH, 1♂). – VENEZUELA: Aragua, Rancho Grande Biol. Stn., 1140m, 10°21'N, 67°41'W, 1-8.III.1995, leg. Robert W. Brooks (#045), flight intercept trap (SEMC, 1♂), Aragua, Rancho Grande Biol. Stn., Pico Periquitos, 1300m, 10°21'N, 67°41'W, 27.II.-6.III.1995, leg. Robert W. Brooks (#051), flight intercept trap (MHNG, 1).

REDESCRIPTION: Measurements (n=4): HW = 0.63 (0.57-0.65); TW = 0.61 (0.55-0.63); PW = 0.53 (0.49-0.57); SW = 0.56 (0.53-0.60); MW = 0.68 (0.64-0.71); AW = 0.59 (0.55-0.66); HL = 0.44 (0.40-0.46); EL = 0.13 (0.13-0.14); FL = 0.11 (0.11-0.12); TL = 0.15 (0.12-0.16); PL = 0.39 (0.36-0.41); SL = 0.62 (0.58-0.66); SC = 0.60 (0.56-0.63); FB = 1.55 (1.46-1.61); BL = 2.80 (2.74-2.85) mm. Body predominantly 'unicoloured', with a darker head. Head very dark brown to black (front of clypeal region and supraantennal prominences appear lighter), pronotum reddish dark brown, elytra dark brown except shoulder area (poorly delimited) a tiny bit lighter (almost medium brown), darkening towards apex. Abdomen medium to dark brown, darkening towards apex. Legs, mouthparts and antennae medium to dark brown, legs sometimes yellowish, antennae sometimes slightly darkening from middle. Pubescence short and medium dense, much longer on abdomen.

Head and pronotum. Mid-antennal articles moderately elongate (antennomere 6 length:width = 0.062:0.049 mm). Clypeus (Fig. 52) basally broad trapezoid, ratio of longitudinal distance of supraantennal prominence tip from eyefront to the same from clypeal front = 0.67-0.72. Infraocular ridge (Fig. 55) stronger anteriorly, finer posteriorly, terminating in a short keel at posterior edge of eye. Temple most strongly



FIGS 7-14

Parosus gigantulus sp. n.; maxilla (7), apex of maxillary palpus, coronal pegs (8), left mandible (9), basal part of right mandible (10), adoral surface of labium (11), hypopharynx (12), coronal pegs on median region of hypopharynx (13), left side of labrum (14). Scale bar = 0.005 mm for 8, 0.008 mm for 13, 0.04 mm for 12, 0.01 mm for 7, 11, 14, 0.16 mm for 9, 10.

curved in middle (therefore sometimes possibly appearing as slightly angled), eye strongly bulging from this arch. Pronotum (Fig. 53) with maximum width 1.59-1.64x base width, sides curved all the way, most strongly anteriorly, anterior angles slightly sharp (strongly curved sides near the angle). Clypeus and supraantennal ridges unpunctured, shiny. Vertex arcuately convex, occasional slight longitudinal depressions not breaking the arch of vertex. Frontoclypeal groove rather broad, but not so shallow. Posterior pronotal midline as a shiny, elevated, unpunctured stripe, continuing anteriorly in two fine vanishing lines. Two longitudinal depressions along sides of posterior midline, punctation mixed with microsculpture in them. Laterad (approximately at middle of these depressions) with two shiny, elevated spots. Pronotal sides with impressions around the middle. Head with 26-30 'longitudinal' puncture lines, pronotum with 20-24 'longitudinal' puncture lines, on mid- and anterior vertex loosened, pronotal punctation more sparse on lateral elevations.

Elytra and abdomen. Elytra (Fig. 54) slightly dilating posteriorly, with a moderately shiny appearance, punctured areas not separating sharply. Elytra bear two small, elongate, rather deep impressions behind the scutellum. Medially serrate fringe present on hind margin of tergite VII. Head, pronotum and elytra with similarly sized punctures, but elytral punctation not umbilicate, interspaces about 1/3-1/2 of puncture diameters. Very base of abdominal tergites (posterior to basal ridges) slightly scabrous, segments with very few scattered punctures. Aedeagus as in Fig. 40.

COMPARATIVE NOTES: Compared to *P. skalitzkyi*, the other species known from the Lesser Antilles, it has smaller, more bulging eyes, if there are depressions on the vertex, they do not form a longitudinal furrow and do not divide the vertex into halves. Similar to the slightly larger *P. colombiensis*, where the head punctation is more coarse.

DISTRIBUTION: The species is known only from the Lesser Antilles and adjacent coastal areas of Venezuela.

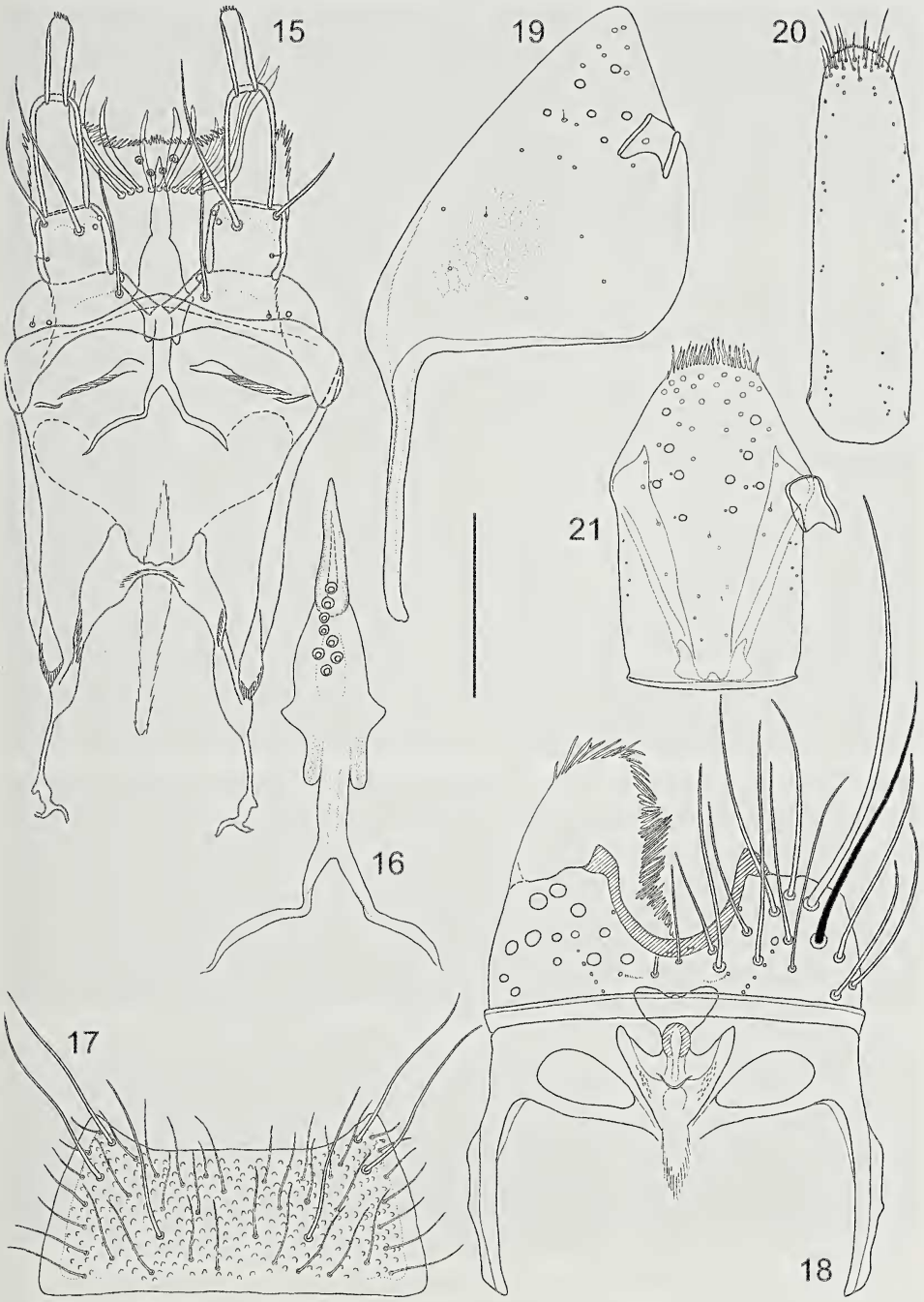
BIONOMICS: Unknown.

NOMENCLATURAL NOTE: *P. antillarum* was originally described in *Parosus* and would have had ending '-us' if treated as an adjective, thus it looks like it was deliberately formed as the genitive plural, meaning "of the Antilles", and thus would not change with the gender of the genus it is placed in. In HERMAN (2001) the name is emended as *P. antillarus*, which is therefore an unjustified emendation that should be rejected.

Parosus bicoloratus sp. nov. Figs 25, 41, 44, 56-59

TYPE MATERIAL: HOLOTYPE (♂), "ECUADOR: Pichincha [Prov.], Nanegalito, 12km S, Bellavista Nature Reserve ca. 2200m, 0°0'54"S, 78°40'56"W, 28 Oct 1999; [leg.] Z. H. Falin (ECU1F99 035), pyrethrum fogging fungusy log" (SEMC). – PARATYPE (1): ECUADOR: Pichincha Prov., old Quito-Santo Domingo road, W Chiriboga [0°16'21"S, 78°43'26"W], 6500-7000', 13.VI.1982, leg. H. Frania, dead vegetation in trees (CNCI, 1).

DESCRIPTION: Forebody and abdomen as in Fig. 44. Measurements (n=2): HW = 0.81 (0.75-0.86); TW = 0.81 (0.76-0.86); PW = 0.77 (0.73-0.80); SW = 0.73 (0.70-0.76); MW = 0.86 (0.82-0.90); AW = 0.72 (0.68-0.76); HL = 0.64 (0.60-0.68); EL = 0.15 (0.14-0.15); FL = 0.12 (0.11-0.12); TL = 0.27 (0.25-0.29); PL = 0.53



FIGS 15-21

(15-18) *Parosus hilaris* Sharp; labium (15), platelike armature in hypopharynx (16), mentum (17), labrum (18). (19-21) *P. unicoloratus* sp. n.; male tergite IX (19), male sternite IX (20), male tergite X (21). Scale bar = 0.06 mm for 16, 0.1 mm for 15, 17, 18, 0.15 mm for 19-21.

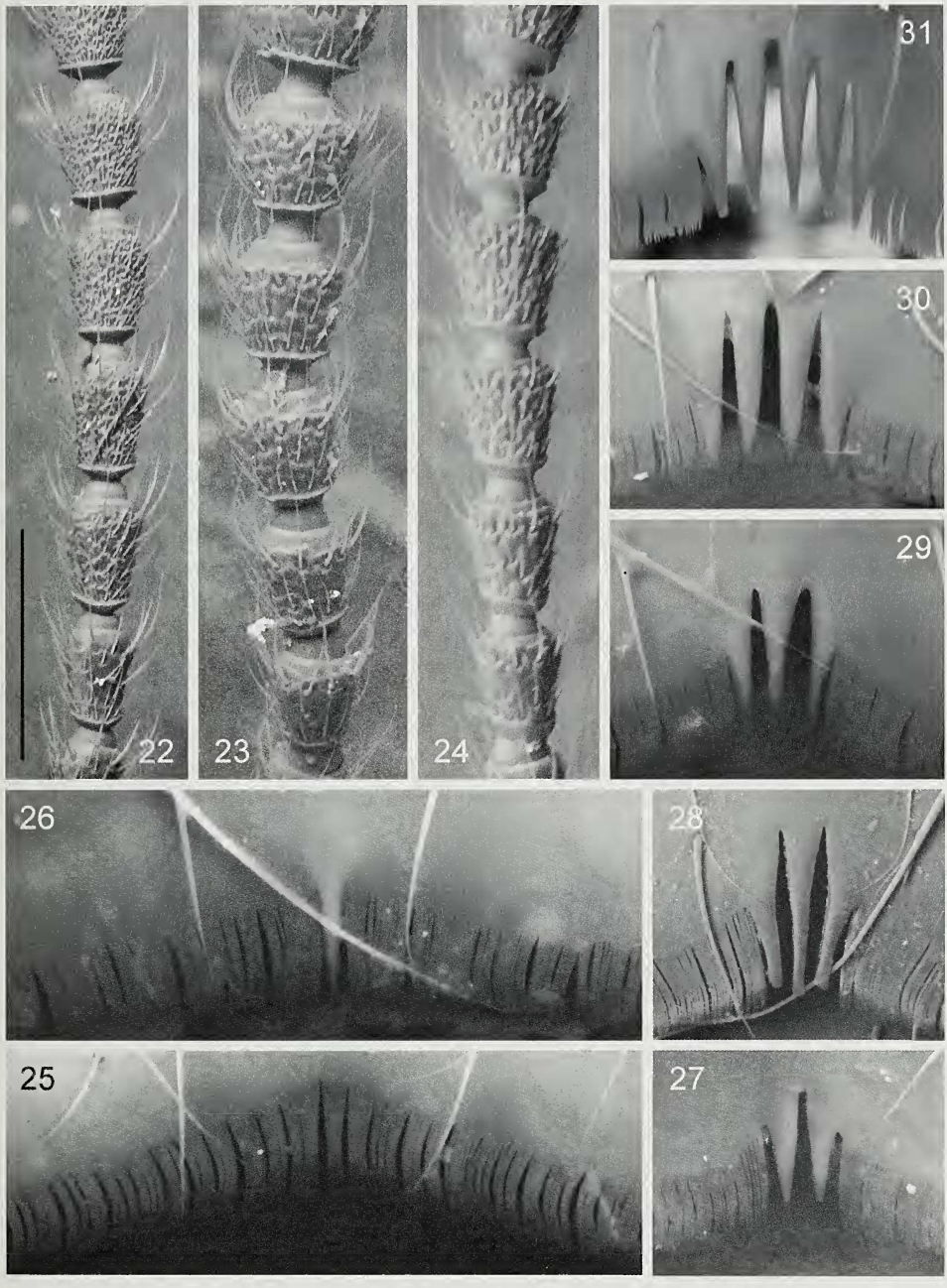
(0.49-0.56); SL = 0.85 (0.78-0.91); SC = 0.83 (0.76-0.89); FB = 2.09 (1.92-2.26); BL = 3.73 (3.54-3.92) mm. Body strikingly 'bicoloured', with red and black parts alternating. Head dark brown to pitch black, pronotum red to medium brown, elytra dark brown. Abdomen red to medium brown, except segments VII-VIII, which are dark brown (also the posterior edge of sternite VI). Legs, mouthparts and antennae reddish medium brown, the antennae slightly darkening around the middle. Pubescence medium short and dense, somewhat longer and sparser on abdomen. Unpunctured areas remarkably separated from punctured ones.

Head and pronotum. Mid-antennal articles about as long as wide (antennomere 6 length:width = 0.072:0.070 mm). Clypeus (Fig. 56) trapezoid, ratio of longitudinal distance of supraantennal prominence tip from eyefront to the same from clypeal front = 0.44-0.57. Infraocular ridge (Fig. 59) rather strong (especially anteriorly), ending in a short, shiny keel at the posterior edge of the eye. Temple rather straight anteriorly, most curved in last third (slightly angled). Pronotum (Fig. 57) with maximum width 1.70-1.78x base width, sides gently curved anteriorly, a little bit straight in posterior third, anterior angles rather sharp. Clypeus and supraantennal ridges shiny and unpunctured. Frontoclypeal groove very shallow, reached by umbilicate puncture field of vertex. Posterior half of vertex very shallowly impressed, at middle of vertex a shinier (more sparsely punctured) transversal line. Anterior half of pronotal midline (except a very small area behind the anterior margin) deeply impressed, unpunctured, forms a posteriorly directed arrowhead shape (with scabrous microsculpture in it). Posterior half as a slightly elevated, unpunctured, shiny stripe, along its sides, two longitudinal depressions (running in 3/4 of total length). Laterad, two longitudinally elongate areas a little elevated and a tiny bit shinier. The pronotal sides with a trace of impression around middle. Head with about 34 'longitudinal' puncture lines, pronotum with about 30 'longitudinal' puncture lines, a small area at mid-vertex unpunctured.

Elytra and abdomen. Elytra (Fig. 58) dilating posteriorly, with two small, longitudinal impressions behind scutellum. Medially serrate fringe absent on hind margin of tergite VII (Fig. 25). Head, pronotum and elytra with similarly sized punctures, elytral punctation not umbilicate, interspaces about 4/5-1/1 (or more) of puncture diameters. Bases of tergites (posterior to basal ridges) with fine transversal coriaceous microsculpture, segments almost without punctation. Aedeagus as in Fig. 41.

ETYMOLOGY: The species is named after the peculiar colour pattern of the specimens.

COMPARATIVE NOTES: From the other three similarly sized 'bicoloured' species (*P. hilaris*, *P. rossii*, *P. taliaferroae*) it differs by the dark abdominal segments being VII and VIII (also the posterior edge of sternite VI), whereas in *P. hilaris* and *P. taliaferroae* the dark ones are tergites V-VI (the sternites are not dark!) and *P. rossii* has only an occasional lighter abdominal base but always dark abdominal apex. Such bright and contrasting colours do not occur in the other two cross-striped species, also their shoulders are lighter (similar to the rest of the elytra in *P. bicoloratus*), and their antennae are less elongate. This species differs from *P. hilaris* by the absence of the medially serrate fringe on the hind margin of tergite VII (while *P. taliaferroae* also lacks the fringe).



FIGS 22-31

(22-24) Antenomeres 4-8. *Parosus longicornis* sp. n. (22), *P. longipennis* sp. n. (23), *P. porto - belo* sp. n. (24). (25-31) Median part of palisade fringe on tergite VII. *P. bicoloratus* sp. n. (25), *P. taliaferroae* sp. n. (26), *P. campbelli* sp. n. (27), *P. gigantulus* sp. n. (28), *P. unicoloratus* sp. n. (29), *P. longipennis* sp. n. (30), *P. brasilianus* sp. n. (31). Scale bar = 0.05 mm for 25, 26, 30, 0.07 mm for 27, 29, 31, 0.1 mm for 23, 28, 0.12 mm for 24, 0.24 mm for 22.

DISTRIBUTION: The species is known only from Ecuador (Pichincha Prov.).

BIONOMICS: Specimens were collected by pyrethrum fogging of a fungusy log and from dead vegetation in trees.

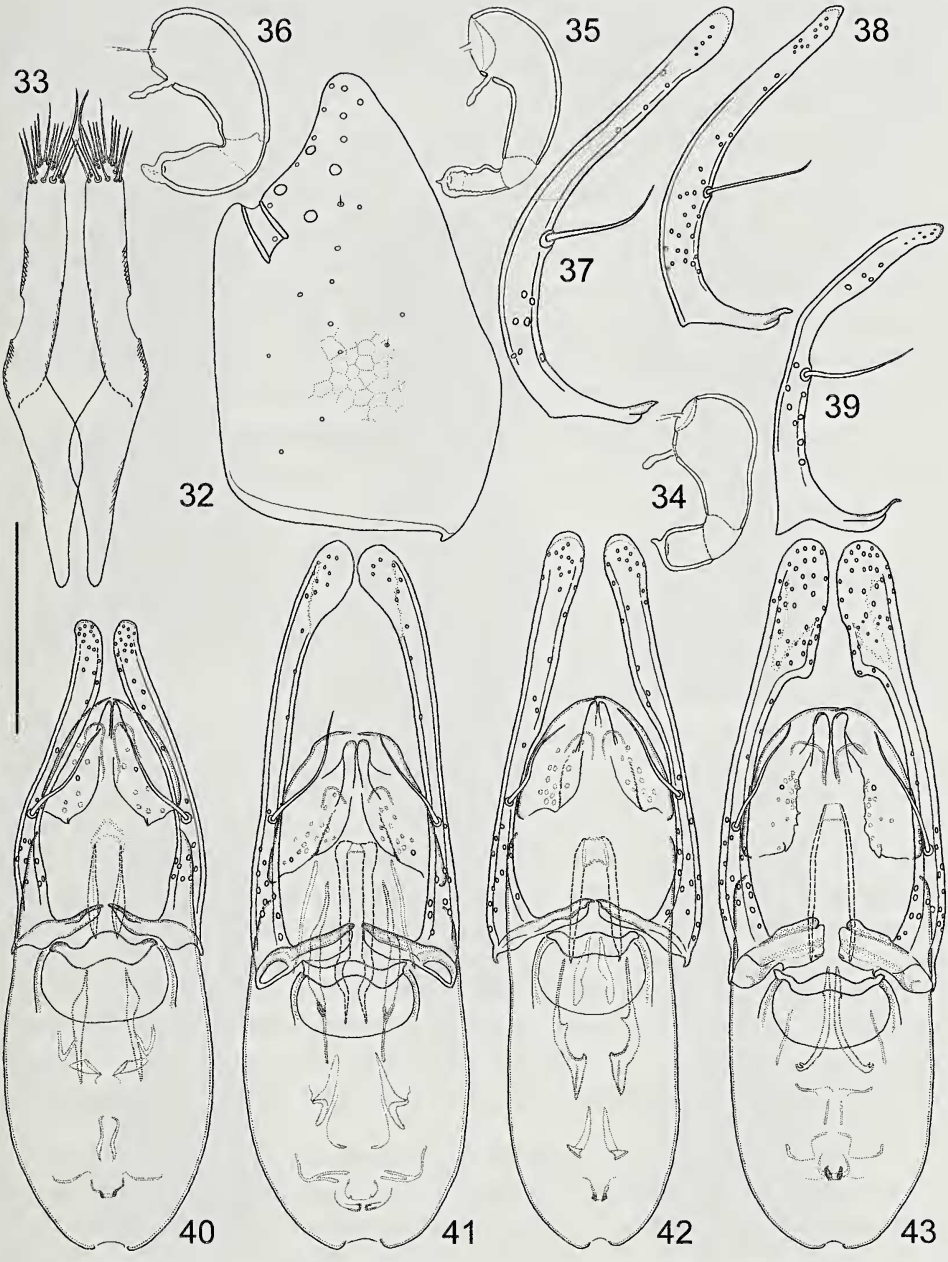
Parosus brasilianus sp. nov. Figs 31, 35, 42, 45, 68-70

TYPE MATERIAL: HOLOTYPE (♂), "BRAZIL: Est. Biol. Boracea [23°38'S, 45°52'W], Salesopolis, SP [= Estado de São Paulo], XII-17-26-1969, [leg.] J. M. & B. A. Campbell" (CNCI). – PARATYPES (3): BRAZIL: Estado de São Paulo, Salesopolis, Estação Biológica de Boracéia, 17-26.XII.1969, leg. J. M. & B. A. Campbell (CNCI, 1♂, 1, MHNG, 1♀).

DESCRIPTION: Forebody as in Fig. 45. Measurements (n=2): HW = 0.59 (0.56-0.63); TW = 0.59 (0.55-0.63); PW = 0.52 (0.49-0.55); SW = 0.56 (0.55-0.56); MW = 0.69 (0.68-0.69); AW = 0.60 (0.59-0.60); HL = 0.43 (0.40-0.46); EL = 0.16 (0.15-0.16); FL = 0.11 (0.11-0.11); TL = 0.14 (0.12-0.15); PL = 0.40 (0.38-0.41); SL = 0.65 (0.64-0.66); SC = 0.63 (0.62-0.64); BL = 2.90 (2.78-3.01); FB = 1.55 (1.48-1.61) mm. Body 'bicoloured' (usually less contrasting than *P. hilaris*). Head dark brown, supraantennal prominences and front of clypeus much lighter, reddish light or medium brown, mediad of supraantennal prominences two larger black spots near ends of frontoclypeal (= epistomal) sulcus, pronotum reddish light brown (sometimes almost orange), elytra dark brown except shoulder area (well delimited, from scutellum to 2/5 of elytra) lighter (yellow to light brown). Abdomen yellow to light brown, tergites V-VI darkened (medium brown). Legs, mouthparts and antennae yellow to light brown. Pubescence medium short and medium dense, on abdomen longer and a little more sparse.

Head and pronotum. Mid-antennal articles very slightly elongate (antennomere 6 length:width = 0.058:0.052 mm). Clypeus (Fig. 68) trapezoid, ratio of longitudinal distance of supraantennal prominence tip from eyefront to the same from clypeal front = 0.29-0.44. Infraocular ridge (Fig. 70) strong, continuing in a strong, shiny postocular process and keel at posterior edge of eye. Temple strongly curved, but most strongly in middle (still not angled), eye fitting rather closely in this arch. Pronotum (Fig. 68) with maximum width 1.61-1.64x base width, sides curved all the way, most strongly anteriorly, posteriorly only very slightly, anterior angles rather obtuse. Clypeus and supraantennal ridges almost unpunctured (only a few small punctures), rather shiny. Frontoclypeal groove rather strong and deep, with umbilicate punctures in it. Middle of vertex posteriorly slightly impressed, but in middle of disc a transversal area more elevated. In middle this elevation divided by a bunch of more deeply impressed punctures (forming something like a longitudinal groove towards frontoclypeal impression). Posterior part of pronotal midline as an elevated and shiny stripe, anteriorly continuing into two fine lines enclosing a depressed area filled with scabrous sculpture. Along sides of posterior half two longitudinal impressions, also filled with scabrous sculpture. Pronotal sides with two oblique depressions around middle. Head with 18-22 'longitudinal' puncture lines, pronotum with about 16-18 'longitudinal' puncture lines, punctation indefinitely loosened mid-vertex, punctures on centre of pronotal disc very obscure.

Elytra and abdomen. Elytra (Fig. 69) slightly dilating posteriorly, with two small, roundish, rather deep impressions behind the scutellum. Medially serrate fringe (Fig. 31) present on hind margin of tergite VII. Punctation on head, pronotum and



FIGS 32-43

(32-34) *Parosus taliaferroae* sp. n.; female tergite IX (32), female genital appendages (33), spermatheca (34). (35-36) Spermathecae. *P. brasilianus* sp. n. (35), *P. hermani* sp. n. (36). (37-39) Parameres in their lateral views. *P. longipennis* sp. n. (37), *P. major* sp. n. (38), *P. skalitzkyi* Bernhauer (39). (40-43) Aedeagi, frontal views. *P. antillarum* Wendeler (40), *P. bicoloratus* sp. n. (41), *P. brasilianus* sp. n. (42), *P. campbelli* sp. n. (43). Scale bar = 0.09 mm for 37, 0.1 mm for 39, 40, 42, 0.13 mm for 32, 34-36, 0.14 mm for 33, 41, 43, 0.24 mm for 38.

abdomen with similar sizes, but elytral punctation not umbilicate, interspaces about 1/3-2/3 of puncture diameters. Bases of tergites (posterior to basal ridges) almost without microsculpture, segments with scattered, fine punctures only. Aedeagus as in Fig. 42, spermatheca as in Fig. 35.

ETYMOLOGY: The species is named after the country of the type locality.

COMPARATIVE NOTES: From the other relatively small-sized and 'bicoloured' species (*P. portobelo* and *P. longipennis*) it can be distinguished by the well-developed postocular process (very weak in the other two species). Regarding the similar sized 'unicoloured' species that have similar head shape (strongly developed postocular process), it can be distinguished from *P. newtoni* by the less transverse pronotum anterior (3/5 base width/anterior width as opposed to 4/7 in *P. newtoni*), from *P. skalitzkyi* by the moderately 'bicoloured' body and the strongly punctate elytra.

DISTRIBUTION: The species is known from one locality in Brazil (Estado de São Paulo), and is probably inhabitant of atlantic forest remnants.

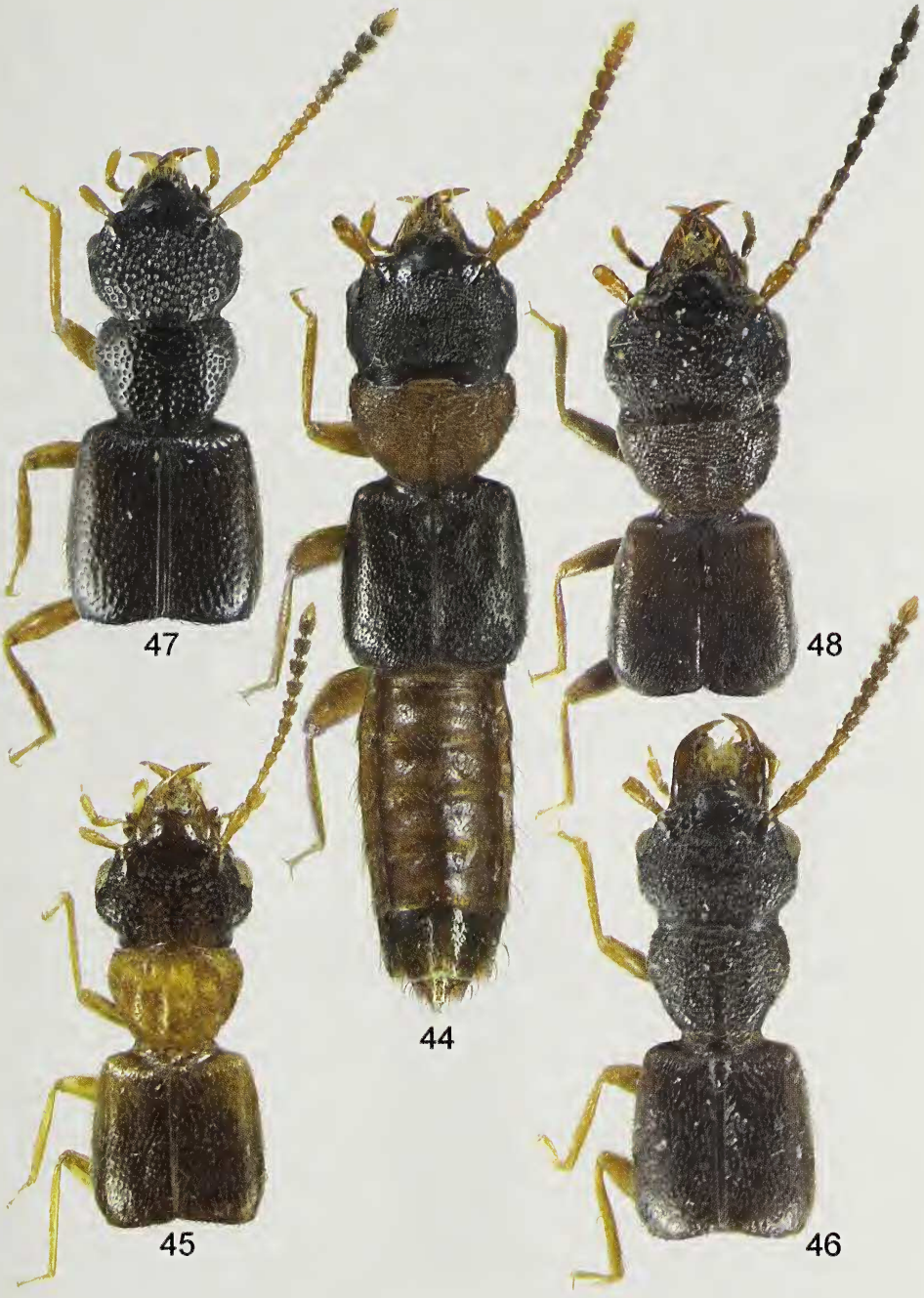
BIONOMICS: Unknown.

Parosus campbelli sp. nov. Figs 27, 43, 49, 60-63

TYPE MATERIAL: HOLOTYPE (♂), "ECUADOR, Napo [Prov.], 2km S Oritoyacu, 22km S Baeza [0°39'21"S, 77°49'31"W], 1500m, III.4-5.1976, [leg.] J. M. Campbell" (CNCI). – PARATYPES (5), ECUADOR: Napo Prov., 2km S Oritoyacu, 22km S Baeza, 1500m, 4-5.III.1976, leg. J. M. Campbell (CNCI, 1♀, 2, HNHM, 1 MHNG, 1).

DESCRIPTION: Habitus as in Fig. 49. Measurements (n=3): HW = 0.68 (0.67-0.70); TW = 0.66 (0.65-0.68); PW = 0.56 (0.56-0.57); SW = 0.56 (0.55-0.57); MW = 0.67 (0.65-0.69); AW = 0.64 (0.63-0.64); HL = 0.57 (0.55-0.59); EL = 0.13 (0.12-0.13); FL = 0.10 (0.10-0.11); TL = 0.24 (0.23-0.24); PL = 0.52 (0.52-0.53); SL = 0.65 (0.64-0.65); SC = 0.63 (0.63-0.64); FB = 1.85 (1.82-1.86); BL = 3.42 (3.28-3.66) mm. Body predominantly 'unicoloured', but with peculiar reddish pronotum. Head blackish dark brown (only supraantennal prominences appear lighter, reddish), pronotum reddish medium to dark brown. Elytra and abdomen blackish dark brown, indefinite shoulder area and posterior margin of tergites with slight reddish overtone. Legs, mouthparts and antennae medium to dark brown, antennae darkening from middle to penultimate antennomere. Pubescence very scattered but medium short, composed of unusually fine hairs. A rather shiny species, but with some faint indefinite microsculpture, reducing the surface lustre.

Head and pronotum. Mid-antennal articles moderately elongate (antennomere 6 length:width = 0.078:0.062 mm). Clypeus (Fig. 60) basally broad trapezoid, ratio of longitudinal distance of supraantennal prominence tip from eyefront to the same from clypeal front = 0.70. Infraocular ridge (Fig. 63) rather strong anteriorly, but vanishing posteriorly, ending in a small shiny tubercle at posterior edge of eye. Temple rather broadly rounded, most curved in middle (but not angled). Pronotum (Fig. 61) with maximum width 1.49-1.60x base width, sides almost evenly rounded anteriorly, straight in posterior half, anterior angles rather obtuse. Clypeal area and supraantennal prominences unpunctured, shiny. Clypeal area poorly delimited, no frontoclypeal groove, only marked by contrastingly punctated areas. Posterior half of vertex very



FIGS 44-48

Forebodies of new *Parosus* species. *P. bicoloratus* sp. n., with abdomen (44), *P. brasilianus* sp. n. (45), *P. colombiensis* sp. n. (46), *P. hermani* sp. n. (47), *P. longicornis* sp. n. (48).

deeply impressed, with some unpunctured spots anteriad of (and around) it. Pronotal midline strongly elevated, starting from a flat surface behind anterior margin, shiny, unpunctured. Two strong, bean-shaped longitudinal impressions along posterior 2/3 of midline. Strong depressions on pronotal sides. Head with about 18 'longitudinal' puncture lines, pronotum with about 16 'longitudinal' puncture lines, both with significant interspaces between punctures, head punctation loosened in posterior mid-vertex groove, pronotal punctures similar in size to the ones on head, but less sharp-edged.

Elytra and abdomen. Elytra (Fig. 62) slightly dilating posteriorly, with very shallow longitudinally elongate impressions behind scutellum, extending into a more sculptured stripe along the suture. Medially serrate fringe (Fig. 27) present on hind margin of tergite VII. Elytra with shallow, indistinct punctures, similar in size to the ones on head and pronotum, interspaces about 1/3-3/4 of puncture diameters. Abdominal tergites with a few large punctures and uneven surface on sides and base (posterior to basal ridges). Aedeagus as in Fig. 43.

ETYMOLOGY: The species is named after Dr. J. Milton Campbell, collector of the type series; he not only collected an amazing amount of interesting new species throughout the Neotropics, but also produced a long series of monographic works that provided a major source of inspiration for generations of young taxonomists.

COMPARATIVE NOTES: This species has very large head, deeply impressed posterior vertex, shallowly punctured elytra and a peculiar colouration (light pronotum and dark brown body). These characteristics separate it from all other named species.

DISTRIBUTION: The species is known only from one location in the northern-central part of Ecuador (Napo Prov.) and its absence in other samples could be due to different life habits.

BIONOMICS: Unfortunately, no bionomical information is found on the labels.

Parosus colombiensis sp. nov. Figs 46, 64-67, 88

TYPE MATERIAL: HOLOTYPE (♂), "COLOM[BIA]: [Departamento del] Magd[alena], 7000', San Lorenzo, 41 km S Sta. Marta [11°06'16"N, 74°04'04"W], V-1-1973, [leg.] Howden & Campbell" (CNCI). – PARATYPE (1), COLOMBIA: Departamento del Magdalena, San Lorenzo, 41km S Santa Marta [2130m], 01.V.1973, leg. Howden & Campbell (MHNG, 1).

OTHER MATERIAL: ECUADOR, Napo, 2km S Oritoyacu, 22 km S Baeza, 1500 m, 4-5.III.1976, leg. J. M. Campbell (CNCI, 1, specimen in bad condition).

DESCRIPTION: Forebody as in Fig. 46. Measurements (n=2): HW = 0.71 (0.69-0.72); TW = 0.69 (0.67-0.70); PW = 0.61 (0.60-0.62); SW = 0.66 (0.65-0.66); MW = 0.78 (0.77-0.78); AW = 0.67 (0.66-0.67); HL = 0.53 (0.52-0.53); EL = 0.15 (0.14-0.15); FL = 0.11 (0.11-0.12); TL = 0.21 (0.21-0.21); PL = 0.47 (0.46-0.47); SL = 0.79 (0.78-0.79); SC = 0.79 (0.78-0.79); FB = 1.92 (1.88-1.95); BL = 3.41 (3.23-3.58) mm. Body 'unicoloured', but appendages contrastingly light coloured. Head and pronotum blackish dark brown (tips of supraantennal prominences appear lighter). Elytra dark brown (poorly delimited shoulder area lighter). Abdomen blackish dark brown (hind margin of tergites somewhat lighter). Legs, mouthparts and antennae yellow to light brown, but antennae slightly darkening from middle to penultimate antennomere. Pubescence rather short and sparse, a little shorter on elytra and longer on abdomen.

FIGS 49-51

Habitus of new *Parosus* species. *P. campbelli* sp. n. (49), *P. gigantulus* sp. n. (50), *P. major* sp. n. (51).

Head and pronotum. Mid-antennal articles about as long as wide (antennomere 6 length:width = 0.069:0.070 mm). Clypeus (Fig. 64) broad trapezoid, ratio of longitudinal distance of supraantennal prominence tip from eyefront to the same from clypeal front = 0.65. Infraocular ridge (Fig. 67) rather strong anteriorly, but vanishing posteriorly, ending in a strong and shiny postocular process at posterior edge of eye. Temple rather straight anteriorly, most curved in middle (slightly angled). Pronotum (Fig. 65) with maximum width 1.65-1.67x base width, sides almost evenly rounded anteriorly, straight in posterior half, anterior angles rather sharp. Clypeus and supraantennal prominences unpunctured, shiny. Clypeal area poorly marked by a fine line and border of contrastingly punctured areas behind it. Middle of vertex with a more sparsely punctured, shiny, transversal area. Behind it vertex shallowly impressed. Anterior half of pronotal midline impressed, unpunctured, forms a posteriorly directed arrowhead shape. Posterior half as a slightly elevated, unpunctured, shiny stripe. Along its sides two longitudinal impressions. Pronotal sides with trace of concavity around middle. Head with 22-26 'longitudinal' puncture lines, pronotum with 18-22 'longitudinal' puncture lines, anterior half of mid-vertex with a few punctures, pronotal punctures about the same size as those on head.

Elytra and abdomen. Elytra (Fig. 66) dilating posteriorly, with two small, longitudinal impressions behind scutellum. Medially serrate fringe present on hind margin of tergite VII. Elytral punctation not umbilicate, size similar those on head and pronotum or somewhat smaller, interspaces about 2/3-1/1 of puncture diameters. Basal half of abdominal tergites (posterior to basal ridges) with transversal coriaceous microsculpture, at points scabrous, segments with some small punctures at base. Aedeagus as in Fig. 88.

ETYMOLOGY: The species is named after the country that the holotype comes from.

COMPARATIVE NOTES: A dark 'unicoloured', medium-sized species with flat head, bulging eyes and strongly developed postocular process. Of the 'unicoloured' species in this size range it can be distinguished from *P. hermani* and *P. thayerae*, because these two species have round, dorsally convex heads and their postocular processes are not so strongly developed. Also similar to the slightly smaller *P. antillarum*, where the head punctation is finer, there are more interspaces between punctures.

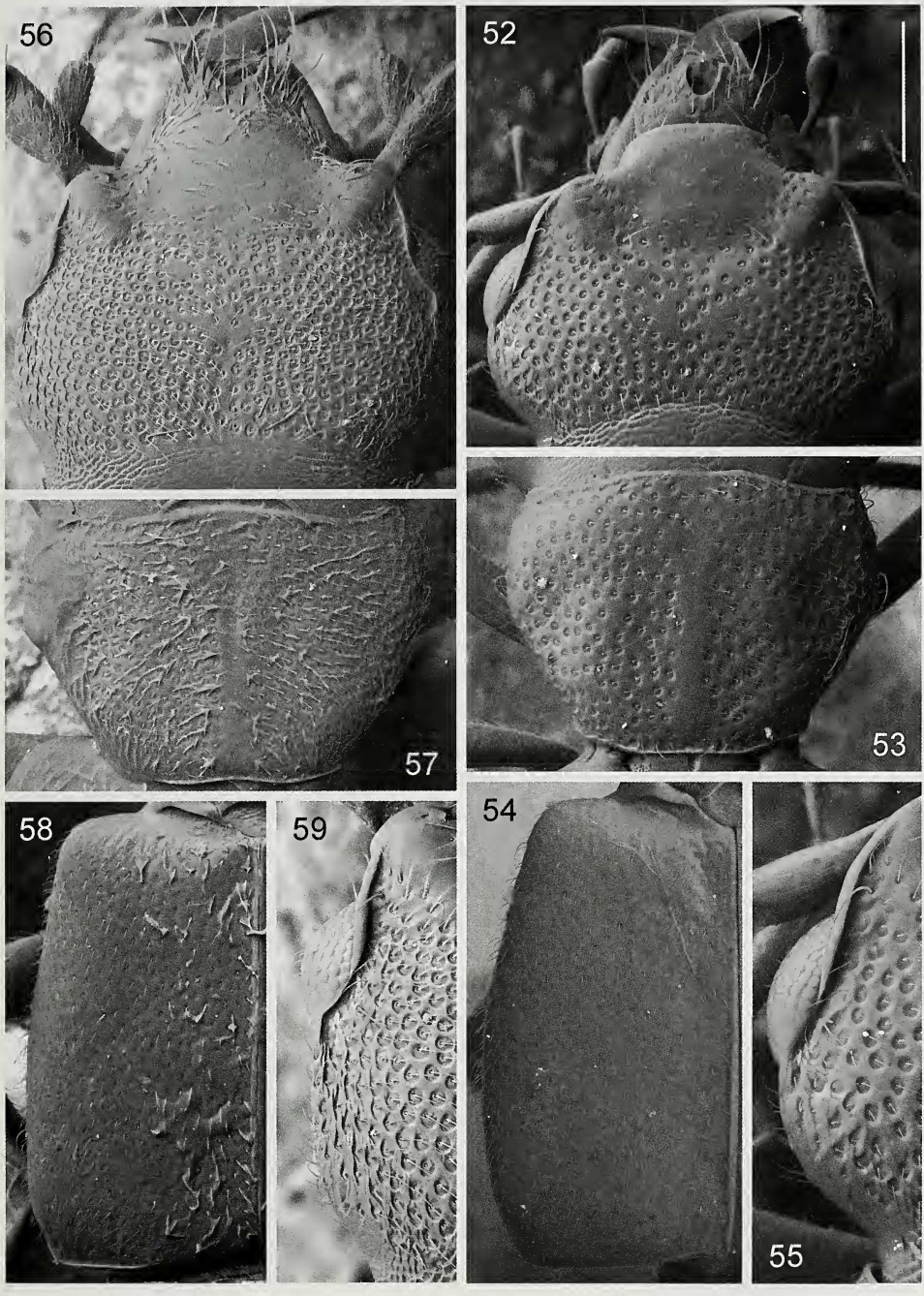
DISTRIBUTION: The species is known from specimens collected in Colombia and Ecuador, this suggests a wider distribution.

BIONOMICS: None of the specimens are associated with any bionomical information.

Parosus gigantulus sp. nov. Figs 1-14, 28, 50, 71-73, 89

TYPE MATERIAL: HOLOTYPE (♂), "COLOM[BIA:] [Departamento del] Magd[alena], San Lorenzo, 41km S Sta. Marta [11°06'16"N, 74°04'04"W], V-3-1973, [leg.] Howden & Campbell" (CNCI). – PARATYPES (2), COLOMBIA: Departamento del Magdalena, San Lorenzo, 41km S Santa Marta, 03.V.1973, leg. Howden & Campbell (MHNG, 1♀), same but 06.V.1973 (CNCI, 1♀).

DESCRIPTION: Habitus as in Fig. 50. Measurements (n=2): HW = 1.03 (0.94-1.12); TW = 1.03 (0.91-1.15); PW = 0.96 (0.88-1.04); SW = 0.99 (0.94-1.04); MW =



FIGS 52-59

(52-55) *Parosus antillarum* sp. n.; head (52), pronotum (53), elytron (54), side of head (55). (56-59) *P. bicoloratus* sp. n.; head (56), pronotum (57), elytron (58), side of head (59). All SEM, dorsal views. Scale bar = 0.12 mm for 55, 0.15 mm for 59, 73, 0.4 mm for 52-54, 0.5 mm for 56-58.

1.15 (1.08-1.21); AW = 0.91 (0.87-0.95); HL = 0.78 (0.72-0.84); EL = 0.18 (0.17-0.18); FL = 0.15 (0.14-0.15); TL = 0.33 (0.28-0.37); PL = 0.69 (0.62-0.75); SL = 1.07 (1.00-1.14); SC = 1.07 (1.01-1.12); FB = 2.70 (2.55-2.85); BL = 5.23 (4.55-5.90) mm. Body 'unicoloured'. Head blackish dark brown (supraantennal prominences lighter, light brown to orange), pronotum reddish dark brown (sometimes a little lighter than head), elytra and abdomen reddish medium to dark brown (often abdomen darkening towards apex, tergite VII reddish dark brown). Legs, mouthparts and antennae reddish medium brown, apex of antennomere 2 and antennomeres 3-10 are darker). Pubescence rather sparse and rather short, except abdomen, where longer.

Head and pronotum. Mid-antennal articles moderately elongate (antennomere 6 length:width = 0.100:0.090 mm). Clypeus (Fig. 71) trapezoid, ratio of longitudinal distance of supraantennal prominence tip from eyefront to the same from clypeal front = 0.85-0.88. Infraocular ridge (Fig. 73) strong, running well behind the eye. Temple straight or slightly dilating in anterior 2/5, slightly angled. Pronotum (Fig. 71) with maximum width 1.74x base width, anteriorly sides almost straight, angles sharp. Behind clypeal area with shallow to medium deep concavities on vertex and on pronotal disc (especially before middle of midline). Supraantennal prominences and clypeal area almost totally unpunctured, only a few small and simple punctures. In posterior half of pronotal midline with an unpunctured, shiny stripe (slightly elevated). Head with 28-30 'longitudinal' puncture lines, pronotum with 28-30 'longitudinal' puncture lines, punctation on mid- and anterior vertex loosened, pronotum with somewhat smaller punctures than those on head.

Elytra and abdomen. Elytra (Fig. 72) dilating posteriorly, behind scutellum rather deeply impressed. Medially serrate fringe (Fig. 28) present on hind margin of tergite VII. Elytral punctation not umbilicate, size a tiny bit finer than on head and pronotum, interspaces about 1/3 of puncture diameters. Bases of abdominal tergites (posterior to basal ridges) with transversal coriaceous microsculpture, posteriorly obscured, segments with a few small, scattered punctures. Aedeagus as in Fig. 89.

ETYMOLOGY: The species is named after being the largest known species of the genus.

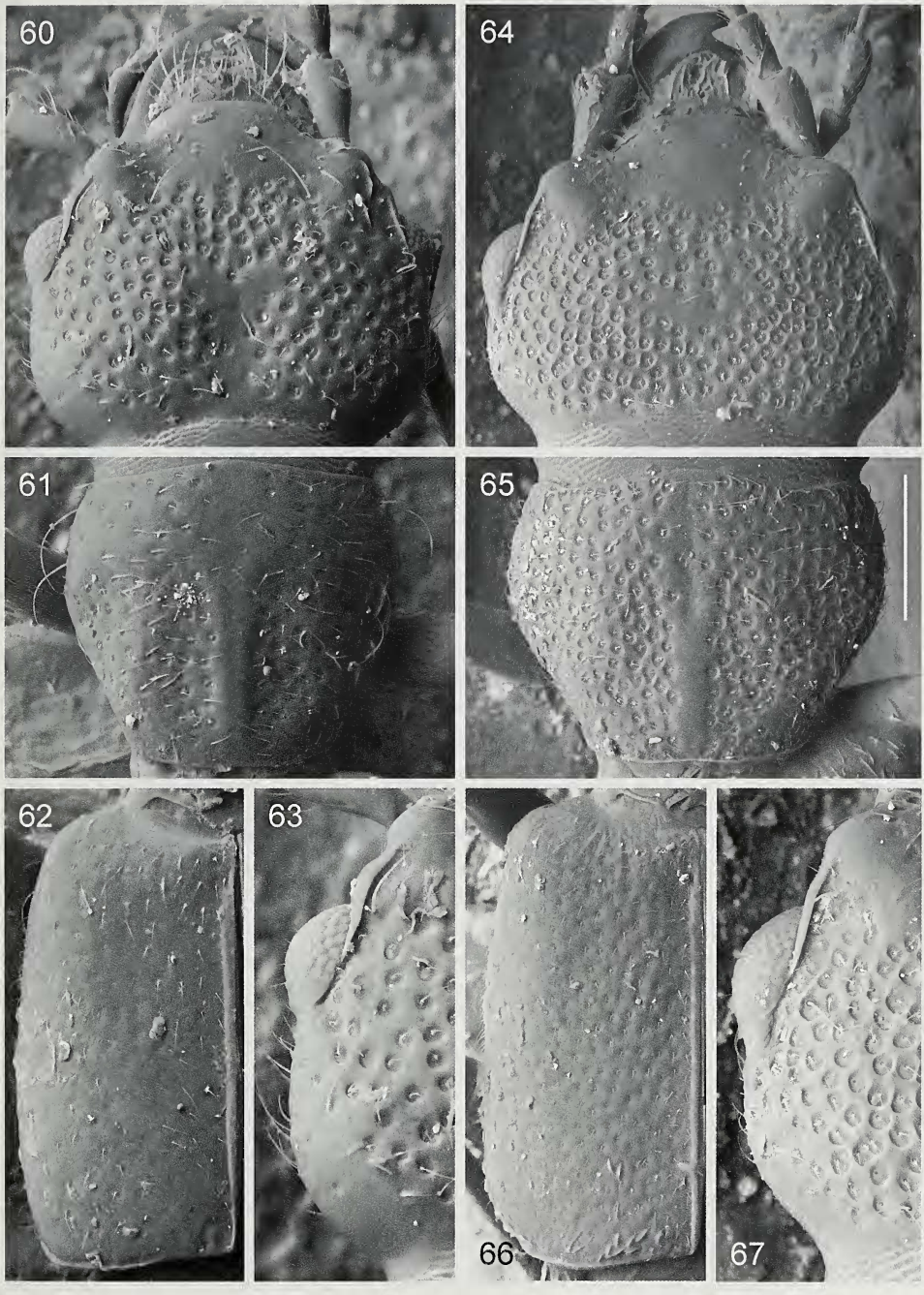
COMPARATIVE NOTES: From the similarly large 'unicoloured' species (*P. longicornis*, *P. major*, *P. unicoloratus*), it can be distingiushed by the moderately elongate antennae, the rather flat head with well noticeable depression at the vertex. Contrary to the most similar *P. unicoloratus* its shoulders are not lighter than the rest of the elytra and the punctation on the head and pronotum is more coarse.

DISTRIBUTION: The species is known only from a single locality in the northern part of Colombia (Dept. Magdalena).

BIONOMICS: No bionomical information is available for the type specimens.

Parosus hermani sp. nov. Figs 36, 47, 74-77, 90

TYPE MATERIAL: HOLOTYPE (♂), "ECUADOR: Pichincha [Prov.], Las Palmeras, 39km NE Alluriqu[í]n, old Quito-Sto. Domingo rd. [00°06'27"S, 78°45'10"W], X-21-[19]88, 7100', foliage, [leg.] L. Herman" (AMNH). – PARATYPES (5), ECUADOR: Pichincha Prov., Las Palmeras, old Quito-Santo Domingo road, km. 59, 43km NE Alluriquín [00°01'50"S, 78°44'09"W], 6400', 23.X.1988, leg. L. Herman, foliage (AMNH, 1), Pichincha Prov., 15.1km



FIGS 60-67

(60-63) *Parosus campbelli* sp. n.; head (60), pronotum (61), elytron (62), side of head (63). (64-67) *P. colombiensis* sp. n.; head (64), pronotum (65), elytron (66), side of head (67). All SEM, dorsal views. Scale bar = 0.15 mm for 63, 67, 0.25 mm for 60-62, 64-66.

NW Nono, 2000m, 0°1'58"S, 78°39'19"W, 24-26.X.1999, leg. Z. H. Falin (ECU1F99 022), ex: flight intercept trap (SEMC, 1♀, MHNG, 1♀), Cotopaxi, Bosque Integral Otonga, 1.VI.2007, 1975m, ex: Fumigación F1, S 00°25'16.6", W 79°00'20.4", leg. A.C. Proaño, C.&A. Barragán (QCAZ, 1, HNHM, 1).

OTHER MATERIAL: ECUADOR, Pichincha Prov., 15.1km NW Nono, 2000m, 0°1'58"S, 78°39'19"W, 24-26.X.1999, leg. Z. H. Falin (ECU1F99 022), ex: flight intercept trap (SEMC, 1, specimen missing tip of abdomen).

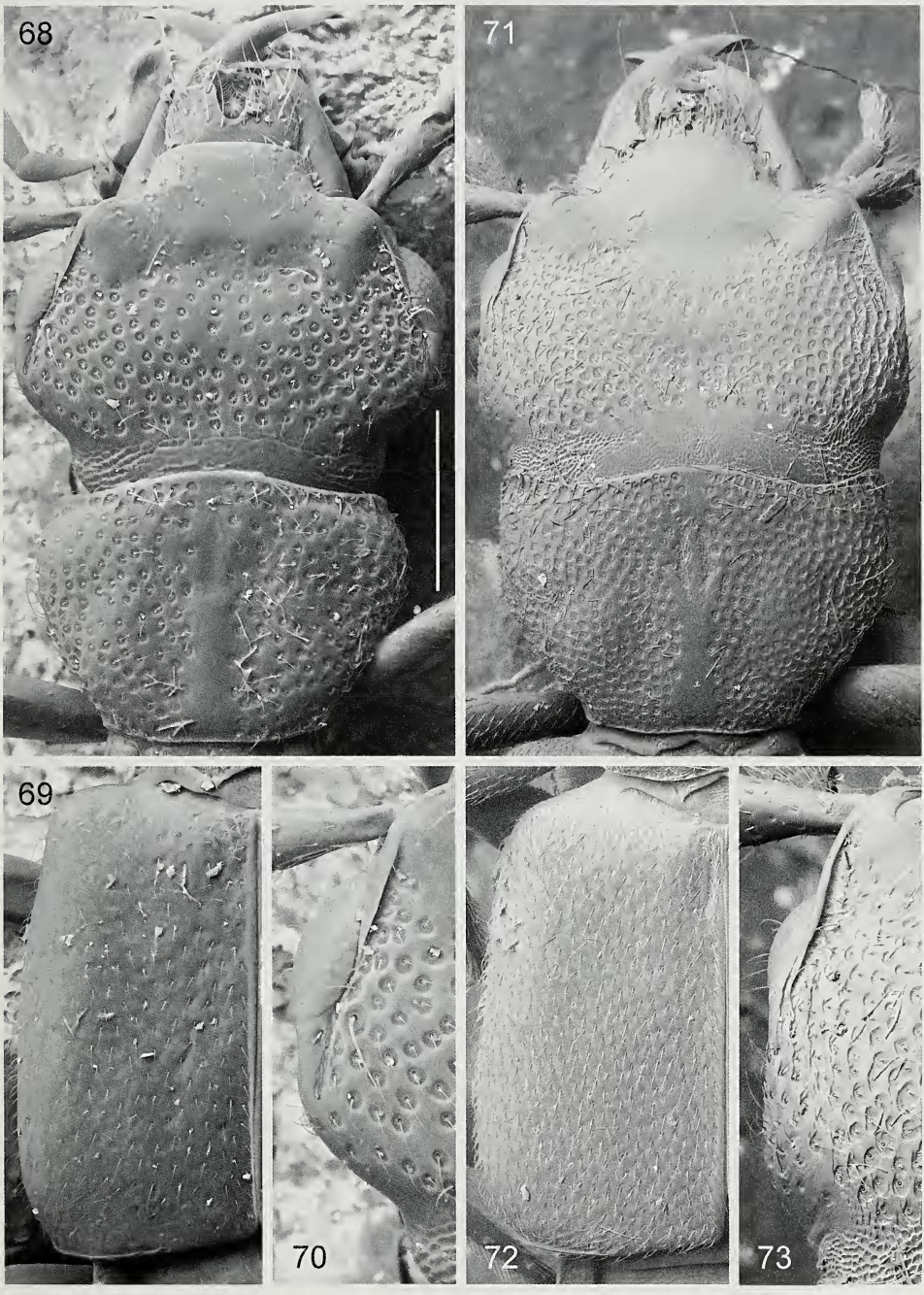
DESCRIPTION: Forebody as in Fig. 47. Measurements (n=6): HW = 0.60 (0.51-0.65); TW = 0.57 (0.49-0.62); PW = 0.53 (0.48-0.56); SW = 0.58 (0.54-0.61); MW = 0.73 (0.65-0.76); AW = 0.64 (0.59-0.70); HL = 0.49 (0.41-0.52); EL = 0.12 (0.10-0.14); FL = 0.10 (0.09-0.12); TL = 0.18 (0.15-0.21); PL = 0.44 (0.41-0.46); SL = 0.70 (0.68-0.73); SC = 0.69 (0.67-0.71); FB = 1.69 (1.59-1.75); BL = 3.08 (2.65-3.45) mm. Body 'unicoloured', but appendages contrastingly light coloured. Head and pronotum blackish dark brown to pitch black (tips of supraantennal prominences lighter). Elytra dark brown (posteriorly darkening, blackish). Abdomen dark brown to pitch black. Legs, mouthparts and antennae yellow to light brown, antennae distinctly darkening from middle to apex, but leaving apex of last antennomere yellow. Pubescence short and sparse, but abdomen with much longer setae. Body surface unusually shiny.

Head and pronotum. Mid-antennal articles moderately elongate (antennomere 6 length:width = 0.070:0.050 mm). Clypeus (Fig. 74) trapezoid, ratio of longitudinal distance of supraantennal prominence tip from eyefront to the same from clypeal front = 0.60-0.69. Infraocular ridge (Fig. 77) rather fine, combined with some punctures at inner eye border, slightly continuing after posterior edge of eye in a short process/keel. Temple rather broadly rounded, most curved in middle (but not angled). Pronotum (Fig. 75) with maximum width 1.45-1.70x base width, sides almost evenly rounded anteriorly, straight in posterior half, anterior angles slightly obtuse. Clypeal area and supraantennal prominences unpunctured (or clypeus with only a few tiny punctures). Clypeus not delimited by groove, only by contrastingly punctured areas. Shiny, unpunctate part of pronotal midline much longer than usual: occupies posterior 3/4 (or more) of length of pronotum, starting from a flat area not far from anterior edge of pronotum. Pronotal sides with a slight depression after middle. Head with about 16 'longitudinal' puncture lines, pronotum with about 16 'longitudinal' puncture lines, head punctation not loosened, pronotum with similar sized punctures to those on head, some interspaces between punctures on both.

Elytra and abdomen. Elytra (Fig. 76) slightly dilating posteriorly, behind scutellum with longitudinal impressions, latter rather slender, close to suture and extending posteriorly along it. Medially serrate fringe present on hind margin of tergite VII. Elytral punctation not umbilicate, smaller than on head and pronotum, more shallow, interspaces about 1/3-1/2 of puncture diameters. Bases of abdominal tergites (posterior to basal ridges) with uneven surface, segments with scattered, tiny punctures. Aedeagus as in Fig. 90, spermatheca as in Fig. 36.

ETYMOLOGY: The species is named after Dr. Lee Herman of the American Museum of Natural History (New York), collector of part of the type series.

COMPARATIVE NOTES: This is an unusually shiny species with black body. The vertex is convex (not flat or depressed as in most other species) similar to that of *P. thayerae*, but the clypeus is unpunctured.



FIGS 68-73

(68-70) *Parosus brasilianus* sp. n.; head and pronotum (68), elytron (69), side of head (70). (71-73) *P. gigantulus* sp. n.; head and pronotum (71), elytron (72), side of head (73). All SEM, dorsal views. Scale bar = 0.15 mm for 70, 0.25 mm for 68-69, 73, 0.4 mm for 72, 0.5 mm for 71.

DISTRIBUTION: Currently only known from Ecuador.

BIONOMICS: Specimens were collected from foliage by fogging and by flight intercept traps.

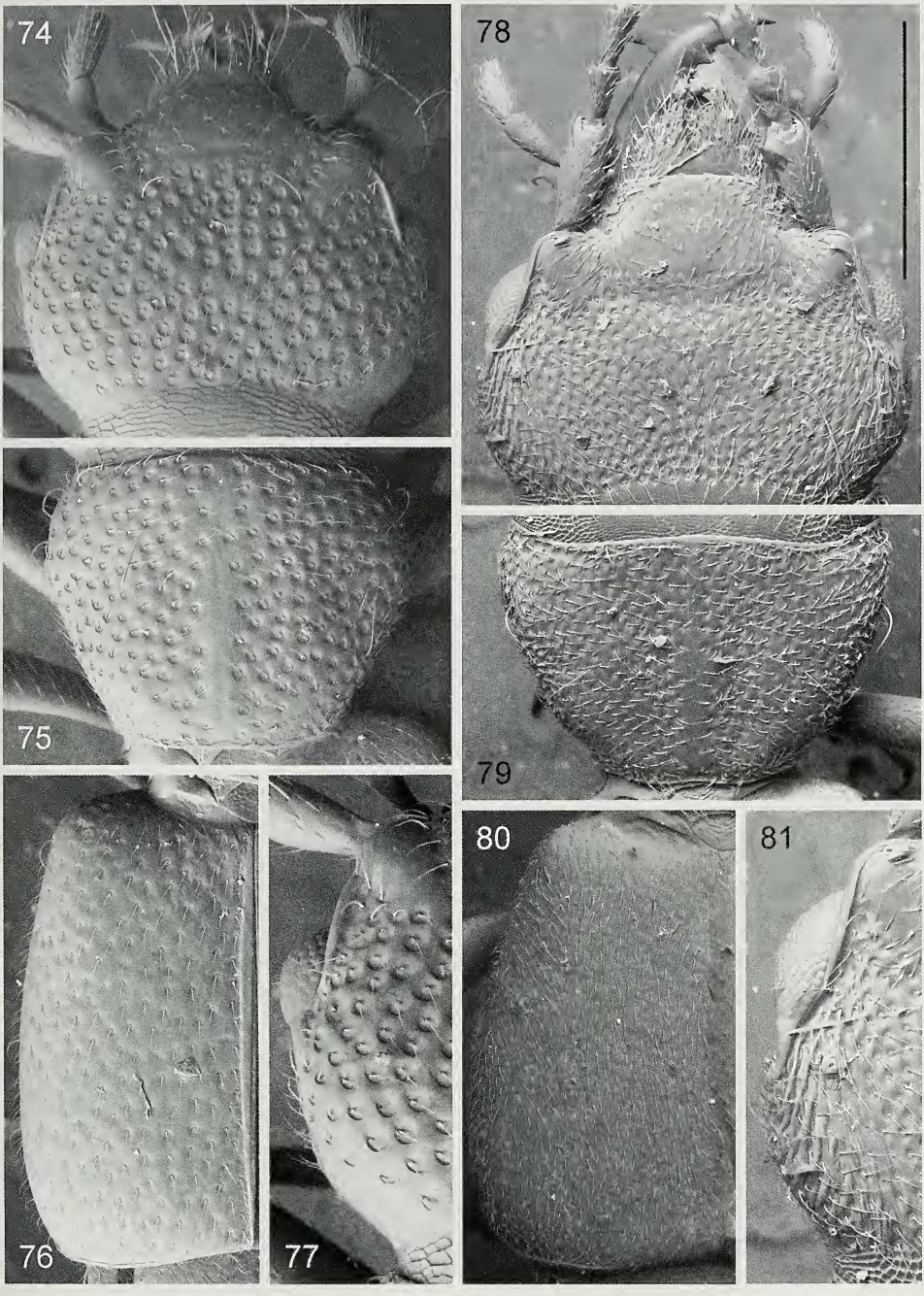
Parosus hilaris Sharp, 1887 Figs 15-18, 91, 96

Parosus hilaris Sharp, 1887: 704. – Herman, 1970: 400. – Herman, 2001: 1463. – Navarrete-Heredia *et al.*, 2006: 56.

TYPE MATERIAL EXAMINED: LECTOTYPE (♂, here designated), "Parosus hilaris; D. S.; V. de Chiriquí [8°44'N, 82°28'W] 2500; –4000ft. Champion. [written on the cardboard on which the specimen is glued] \ Sp. figured. \ V. de Chiriqui,; 2-3000ft.; Champion. \ B. C. A. Col. I. 2.; Parosus; hilaris; Sharp. \ Lectotypus; Parosus; hilaris Sharp; des. Makranczy, 2000 \ Parosus; hilaris Sharp; det. Makranczy, 2000" (BMNH). – PARALECTOTYPE (1), same data as lectotype (BMNH, 1).

OTHER MATERIAL: COSTA RICA, Guanacaste Prov., East end of Lake Arenal [10°28'N, 84°48'W], 570m, 20.V.1993, leg. J.S. & A.K. Ashe (#030), ex. roadside slash (SEMC, 1), Cartago Prov., Turrialba, [Lago del] Catie [9°53'23"N, 83°39'16"W], 16-20.V.1979, leg. J. M. & B. A. Campbell (CNCI, 1), Cartago[/San José] Prov., 23.3km NE San José [10°09'27"N, 83°56'43"W], 440m, 17.V.1993, leg. J.S. & A.K. Ashe (#014), ex: old treefall litter (SEMC, 1♂), San José Prov., km. 117 Pan-Am. Hwy 19 km N San Isidro, 1800m, 9°28'0"N, 83°42'20"W, 20-25.VI.1997, leg. S. & J. Peck (CR1P97 023), ex: flight intercept trap (SEMC, 1), Limon Prov., Guápiles [10°12'N, 83°48'W] (Kliefoth), VIII.1941 (coll. Bierig, FMNH, 1), Puntarenas Prov., Monte Verde [10°17'57"N, 84°48'03"W], 1550m, 26.V.1989, leg. J. Ashe, R. Brooks, R. Leshen, ex: beating (SEMC, 1), Puntarenas Prov., Península de Osa, Fundación Neotróp.[ica] 10km W Rincon, 8°42'30"N, 83°31'30"W, 20m, 23.VI.1997, leg. R. Anderson (CR1A97 029a), ex: berlese forest litter (SEMC, 1), Puntarenas Prov., Península de Osa, Rancho Quemado [8°41'40"N, 83°33'49"W], 200m, 12.III.1994, leg. A. Marín, malaise [trap] (SEMC, 1), Heredia Prov., La Selva Biological Research Station, 3km S Puerto Viejo, 10°25'0"N, 84°0'0"W, 80m, 2-15.VI.1996, leg. R. Hanley (CR1H96 016), ex: flight intercept trap (SEMC, 2), Heredia Prov., La Selva Biol. Res. Sta., 3.2km SE Puerto Viejo [10°25'45"N, 83°58'52"W], 100m, 3.III.1992, leg. W. Bell, ex: flight intercept trap (SEMC, 2), Heredia Prov., La Selva Biol. Res. Sta., 3.2km SE Puerto Viejo, 100m, 17.II.1992, leg. W. Bell, ex: flight intercept trap (SEMC, 1), same but 19.II.1992 (SEMC, 1); same but 17.III.1992 (HNHM, 1mp), Heredia Prov., La Selva Biological Research Station, near Puerto Viejo de Sarapiqui [10°25'53"N, 84°00'20"W, 50m], 18.II.1985, leg. L. Herman (#2113), ex: epiphytic humus (AMNH, 1♂, 1), same but leg. L. Herman (#2109), ex: stream side leaf litter (AMNH, 1), same but leg. L. Herman (#2116), ex: debris at node of palm frond (AMNH, 1). – PANAMA, Chiriquí Prov., La Fortuna, "Hydro. Trail" 08°42'N, 82°14'W, 1150m, 23.V.-9.VI.1995, leg. J. Ashe, R. Brooks (#156), ex: flight intercept trap (SEMC, 1), Panamá Prov., Old Plantation rd., 6.9km S Gamboa, 09°05'N, 79°40'W, 80m, 4-7.VI.1995, leg. [J.S.] Ashe & [R.] Brooks (#137), ex: flight intercept trap (SEMC, 1), Canal Zone, Barro Colorado Island [09°09'N, 79°51'W], 16.I.1959, leg. H. Dybas, ex: fermented fibrous log & at light (FMNH, 1), Cocle Prov., El Valle [de Antón] (trail to Las Minas) [08°35'N, 80°09'W], 2400-2600ft, 23.II.1959, leg. H.S. Dybas (FMNH, 1). – VENEZUELA, E[sta]do. Aragua, Rancho Grande (15km N Maracay) [10°21.5'N, 67°35.5'W], 1500m, 21.II.1971, leg. S. Peck (CNCI, 1).

REDESCRIPTION: Measurements (n=2): HW = 0.73 (0.70-0.76); TW = 0.74 (0.71-0.77); PW = 0.71 (0.68-0.74); SW = 0.66 (0.65-0.66); MW = 0.78 (0.77-0.78); AW = 0.66 (0.63-0.68); HL = 0.60 (0.58-0.61); EL = 0.16 (0.15-0.16); FL = 0.10 (0.10-0.10); TL = 0.26 (0.26-0.26); PL = 0.49 (0.47-0.50); SL = 0.69 (0.68-0.69); SC = 0.67 (0.66-0.67); FB = 2.03 (1.86-2.19); BL = 3.84 (3.41-4.27) mm. Body 'bicoloured'. Head dark brown to blackish (clypeal region and supraantennal prominences much lighter, reddish light or medium brown), mediad of supraantennal prominences two larger black spots near ends of frontoclypeal (= epistomal) sulcus, pronotum reddish



FIGS 74-81

(74-77) *Parosus hermani* sp. n.; head (74), pronotum (75), elytron (76), side of head (77). (78-81) *P. longicornis* sp. n.; head (78), pronotum (79), elytron (80), side of head (81). All SEM, dorsal views. Scale bar = 0.25 mm for 77, 0.35 mm for 81, 73, 0.4 mm for 74-76, 0.5 mm for 78-80.

light brown (sometimes almost orange), elytra dark brown except shoulder area (unusually well delimited, from scutellum to 3/5 of elytra) lighter (yellow to light brown). Abdomen yellow to light brown, tergites V-VI darkened (medium brown). Legs, mouthparts and antennae yellow to light brown. Pubescence medium short and medium dense, much shorter and more dense on elytra, longer and much sparser on abdomen.

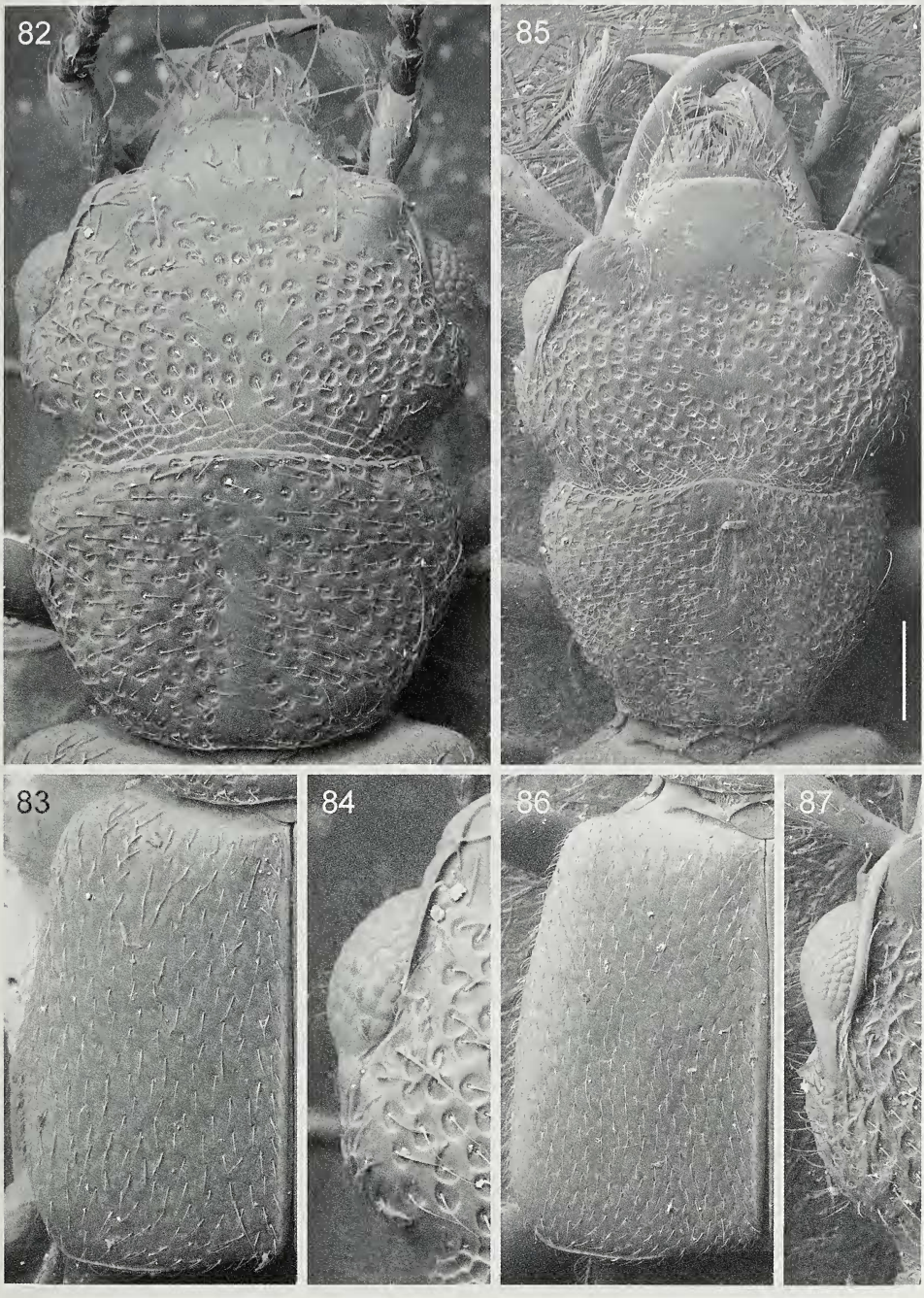
Head and pronotum. Mid-antennal articles about as long as wide (antennomere 6 length:width = 0.068:0.070 mm). Clypeus trapezoid, ratio of longitudinal distance of supraantennal prominence tip from eyefront to the same from clypeal front = 0.50-0.55. Infraocular ridge (Fig. 96) strong, ending in an elevated triangular part of a shiny postocular area and longer, posteriorly vanishing keel after posterior edge of eye. Temple almost straight (slightly dilating) long after eye, but rather angled at posterior 1/4 or just strongly curved in posterior half, eye strongly bulging. Pronotum with maximum width 1.72-1.82x base width, sides curved all the way, most strongly anteriorly, anterior angles sharp. Clypeus and supraantennal ridges almost unpunctured, shiny (only a few tiny, scattered punctures). Clypeal area poorly marked by an extremely shallow frontoclypeal groove, with umbilicate punctures reaching this area. Vertex slightly depressed along an indistinct longitudinal midline, middle of vertex sometimes more shiny (more sparse punctation, may even be slightly elevated), base of midline with occasionally deeper depression. Pronotal midline appears as (acute-angled) V-shaped shiny elevation, lines becoming finer and vanish anteriorly (between them microsculpture), not reaching anterior edge. Laterad two longitudinally elongate impressions, with two elevated shiny spots at their outer middle. Pronotal sides have slight impressions around the middle. Head with 20-26 'longitudinal' puncture lines, pronotum with 22-24 'longitudinal' puncture lines, pronotal punctures same sized compared to those on head, mid- and anterior vertex with loosened punctation.

Elytra and abdomen. Elytra slightly dilating posteriorly, with two small, slightly elongate, rather deep impressions behind scutellum. Medially serrate fringe present on hind margin of tergite VII. Elytral punctures not umbilicate and a tiny bit smaller than those on pronotum, interspaces about 1/3-2/3 (or more) of puncture diameters. Bases of tergites (posterior to basal ridges) a little scabrous on first few visible segments, otherwise almost unsculptured and with occasional small punctures only. Aedeagus as in Fig. 91.

COMPARATIVE NOTES: This species is extremely similar to *P. taliaferroae*, can only be distinguished by the presence of the medially serrate fringe on the hind margin of tergite VII. A more distantly similar species is *P. bicoloratus*, which, however, has more elongate antennae, differently positioned dark stripe on the abdomen (see details at *P. bicoloratus*) and also lacks the medially serrate fringe on the hind margin of tergite VII. *P. rossii* is a similarly sized 'bicoloured' species, but with an always dark abdominal apex (abdominal base occasionally lighter).

DISTRIBUTION: The species is so far known from Costa Rica, Panama and Venezuela.

BIONOMICS: Collected mostly from treefall litter and various plant debris, by beating or with flight intercept traps.



FIGS 82-87

(82-84) *Parosus longipennis* sp. n.; head and pronotum (82), elytron (83), side of head (84). (85-87) *P. major* sp. n.; head and pronotum (85), elytron (86), side of head (87). All SEM, dorsal views. Scale bar = 0.06 mm for 84, 0.1 mm for 82, 83, 0.16 mm for 87, 0.25 mm for 85-86.

Parosus longicornis sp. nov. Figs 22, 48, 78-81, 92

TYPE MATERIAL: HOLOTYPE (♂), "PERU: Junín [Dept.]: San Emiliano de Cachingareni, approx. 55km SE Satipo [11°38'S, 74°18'W], 1000m, May 20-21,1972, [leg.] R. T. & J. C. Schuh" (AMNH).

DESCRIPTION: Forebody as in Fig. 48. Measurements (n=1): HW = 0.90; TW = 0.93; PW = 0.81; SW = 0.73; MW = 0.86; AW = 0.76; HL = 0.67; EL = 0.17; FL = 0.14; TL = 0.29; PL = 0.52; SL = 0.88; SC = 0.84; FB = 2.20; BL = 4.00 mm. Body 'unicoloured'. Head and pronotum blackish dark brown (only supraantennal prominences lighter brown), elytra blackish dark brown except shoulder area (not delimited) lighter, darkening towards apex. Abdomen dark brown, darkening towards apex. Legs, mouthparts and antennae medium brown, basal antennomeres lighter (first light brown). Pubescence medium sparse and on elytra rather short, on other body parts longer.

Head and pronotum. Mid-antennal articles elongate (antennomere 6 length: width = 0.130:0.080 mm), tip of antennomeres conical. Clypeus (Fig. 78) basally broad trapezoid, ratio of longitudinal distance of supraantennal prominence tip from eyefront to the same from clypeal front = 0.57. Infraocular ridge (Fig. 81) rather strong, ends in a small, shiny, triangular postocular process. Temple slightly dilating posteriorly, rounded. Pronotum (Fig. 79) with maximum width 1.86x base width, sides very weakly rounded (both anteriorly and posteriorly), anterior angles appearing sharp (dorsal view). Clypeal area covered by somewhat smaller, simple punctures, with large, shiny interspaces. Vertex extremely shallowly impressed. Posterior half of pronotal midline shiny and slightly elevated, with two impressed areas at its sides. At sides of pronotum with two slight concavities around middle. Supraantennal prominences shiny, without punctation. Head with about 30 'longitudinal' puncture lines, pronotum with about 26 'longitudinal' puncture lines, top of head without loosening of punctures, pronotal puncture sizes similar to those on head.

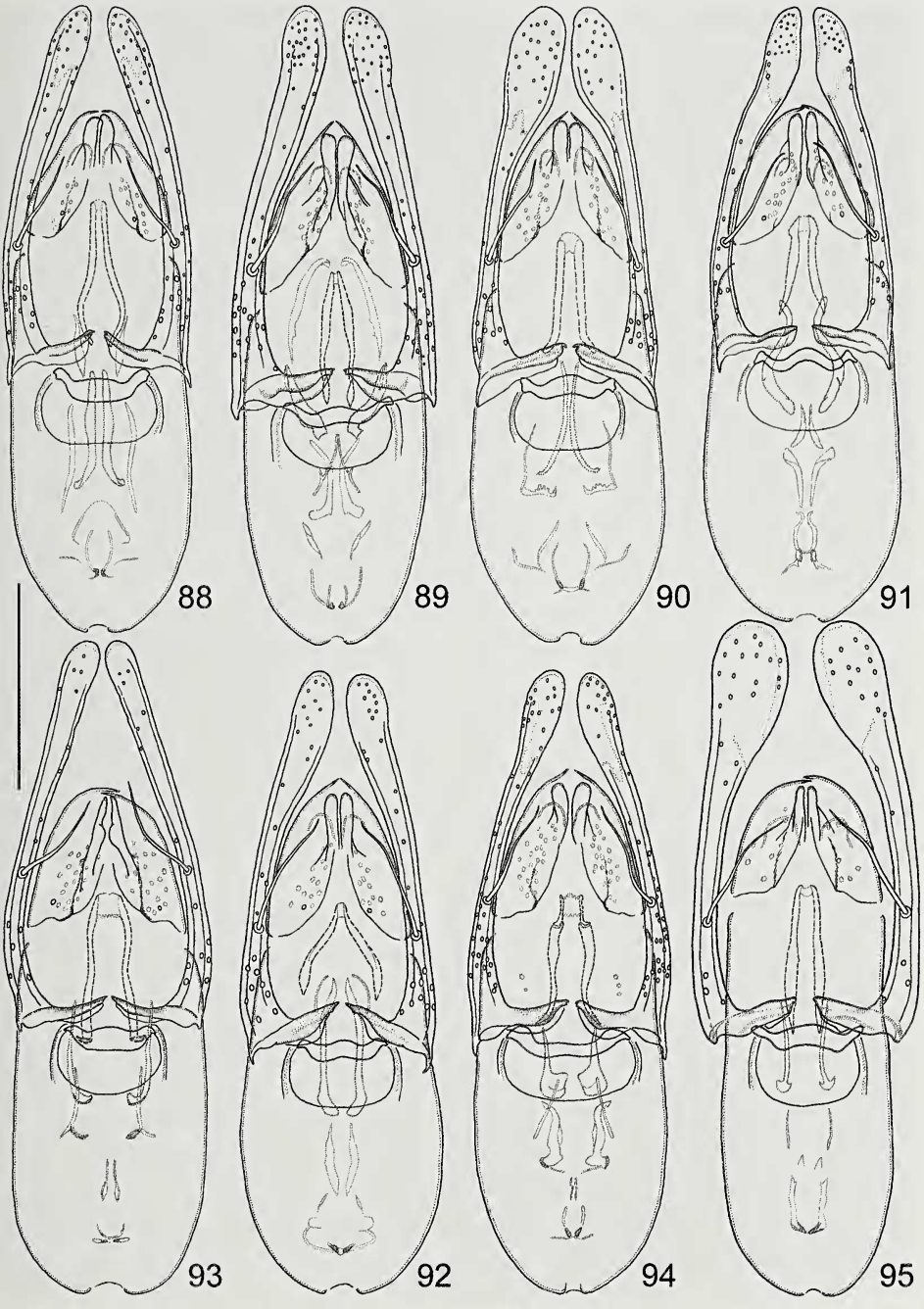
Elytra and abdomen. Elytra (Fig. 80) slightly dilating posteriorly, impressions behind scutellum rather shallow and longitudinally elongate. Medially serrate fringe present on hind margin of tergite VII. Elytral punctation not umbilicate, much finer than on head and pronotum, interspaces about 1/3-2/3 of puncture diameters. Bases of abdominal tergites (posterior to basal ridges) without apparent microsculpture, segments with more apparent punctation, small, not so scattered punctures. Aedeagus as in Fig. 92.

ETYMOLOGY: The species is named after its peculiarly long antennae.

COMPARATIVE NOTES: From the other similarly large 'unicoloured' species (*P. major*, *P. gigantulus*, *P. unicoloratus*) it differs not only by its very elongate antennae, but also by a distinctly punctured clypeus (the other species sometimes have a few tiny, scattered punctures, too).

DISTRIBUTION: The species is known from only one specimen, from Junín Dept. in the central part of Peru.

BIONOMICS: Unknown.



FIGS 88-95

Aedeagi, frontal views. *P. colombiensis* sp. n. (88), *P. gigantulus* sp. n. (89), *P. hermani* sp. n. (90), *P. hilaris* Sharp (91), *P. longicornis* sp. n. (92), *P. longipennis* sp. n. (93), *P. major* sp. n. (94), *P. minutus* sp. n. (95). Scale bar = 0.08 mm for 95, 0.09 mm for 93, 0.13 mm for 88, 90-92, 0.15 mm for 89, 0.2 mm for 94.

Parosus longipennis sp. nov. Figs 23, 30, 37, 82-84, 93, 129

TYPE MATERIAL: HOLOTYPE (♂), "BOLIVIA: Cochabamba [Dept.], Cochabamba, 124 km E Yungas, (Cochabamba – Villa Tunari rd.), 17°3'54"S, 65°38'43"W, 730m, 1-6.Feb.1999, [leg.] R. Hanley (BOL1H99 029), ex: flight intercept trap" (SEMC). – PARATYPES (4), PERU, Cuzco Dept., Consuelo, Manu rd., km. 165 [13°02'S, 71°30'W], 7.X.1982, leg. L. E. Watrous and G. Mazurek (FMHD #82-349), beating dead branches (FMNH, 1♂, MHNG, 1), same but 9-10.X.1982, leg. L. E. Watrous and G. Mazurek (FMHD #82-414), flight intercept trap (FMNH, 1), same but 12.X.1982, leg. L. E. Watrous and G. Mazurek (FMHD #82-374), ex rotten palm (FMNH, 1).

DESCRIPTION: Forebody as in Fig. 129. Measurements (n=3): HW = 0.49 (0.46-0.52); TW = 0.48 (0.44-0.52); PW = 0.44 (0.42-0.47); SW = 0.46 (0.44-0.48); MW = 0.57 (0.52-0.60); AW = 0.50 (0.49-0.51); HL = 0.35 (0.33-0.38); EL = 0.12 (0.115-0.125); FL = 0.10 (0.10-0.10); TL = 0.12 (0.10-0.14); PL = 0.34 (0.32-0.35); SL = 0.53 (0.50-0.55); SC = 0.51 (0.48-0.53); FB = 1.29 (1.22-1.35); BL = 2.46 (2.32-2.57) mm. Body 'bicoloured'. Head dark brown (only supraantennal prominences appear lighter), pronotum yellowish light brown, elytra medium to dark brown except a semi-triangular part at shoulders (from scutellum to 2/5 of outer edge) being yellow to light brown, with apex appearing darker, abdomen light brown (except terminal segments a tiny bit darker). Legs, mouthparts and antennae yellow to light brown. Pubescence rather sparse and rather short, except abdomen, where longer.

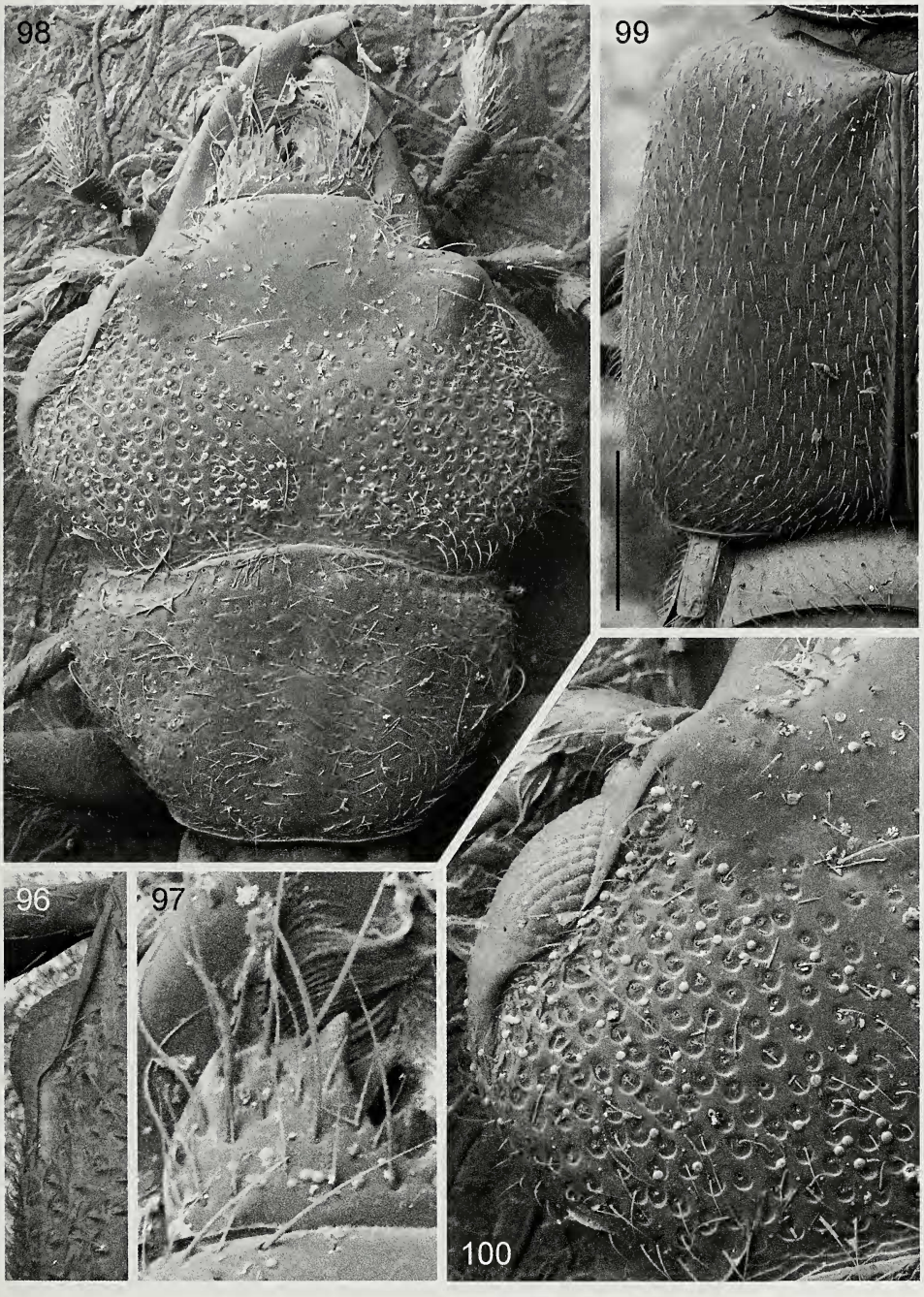
Head and pronotum. Mid-antennal articles moderately elongate (antennomere 6 length:width = 0.045:0.040 mm). Clypeus (Fig. 82) basally broad trapezoid, ratio of longitudinal distance of supraantennal prominence tip from eyefront to the same from clypeal front = 0.42-0.50. Infraocular ridge (Fig. 84) fine, not running behind the posterior margin of the eye. Temple fully rounded to slightly angled. Pronotum (Fig. 82) with maximum width 1.68x base width, anteriorly sides rounded, angles obtuse. Behind clypeal area with a shallow, transversal impression, on pronotal disc with one in anterior 1/4 of pronotal midline and one surrounding hind half of midline. Clypeal area and supraantennal prominences without punctation, albeit with some tiny, regular punctures. Posterior half of pronotal midline as an unpunctured, shiny stripe (slightly elevated). Head with 18-20 'longitudinal' puncture lines, pronotum with about 28 'longitudinal' puncture lines, on mid-vertex punctation somewhat loosened, on pronotum puncture sizes same as on head.

Elytra and abdomen. Elytra (Fig. 83) dilating posteriorly, behind scutellum with very shallow impressions. Medially serrate fringe (Fig. 30) present on hind margin of tergite VII. Elytral punctation not umbilicate, size similar to that on head and pronotum, interspaces about 1/3 of puncture diameters. On bases of abdominal tergites (posterior to basal ridges) transversal coriaceous microsculpture, segments with a few small, scattered punctures. Aedeagus as in Fig. 93.

ETYMOLOGY: The species is named after the unusually elongate parameres of the aedeagus in this species.

COMPARATIVE NOTES: From the similarly 'bicoloured' and small-sized species (*P. portobelo* and *P. brasilianus*) it can be distinguished by the bulging eyes and yellowish shoulders. *P. minutus* is significantly smaller.

DISTRIBUTION: The species is known from Peru (Cuzco Dept.) and Bolivia (Cochabamba Dept.).



FIGS 96-100

(96) *P. hilaris* Sharp; infraocular ridge. (97-100) *Parosus newtoni* sp. n.; left lobe of labrum (97), head and pronotum (98), elytron (99), side of head (100). All SEM, dorsal views. Scale bar = 0.08 mm for 95, 0.13 mm for 93, 0.22 mm for 88, 90-92, 0.25 mm for 89.

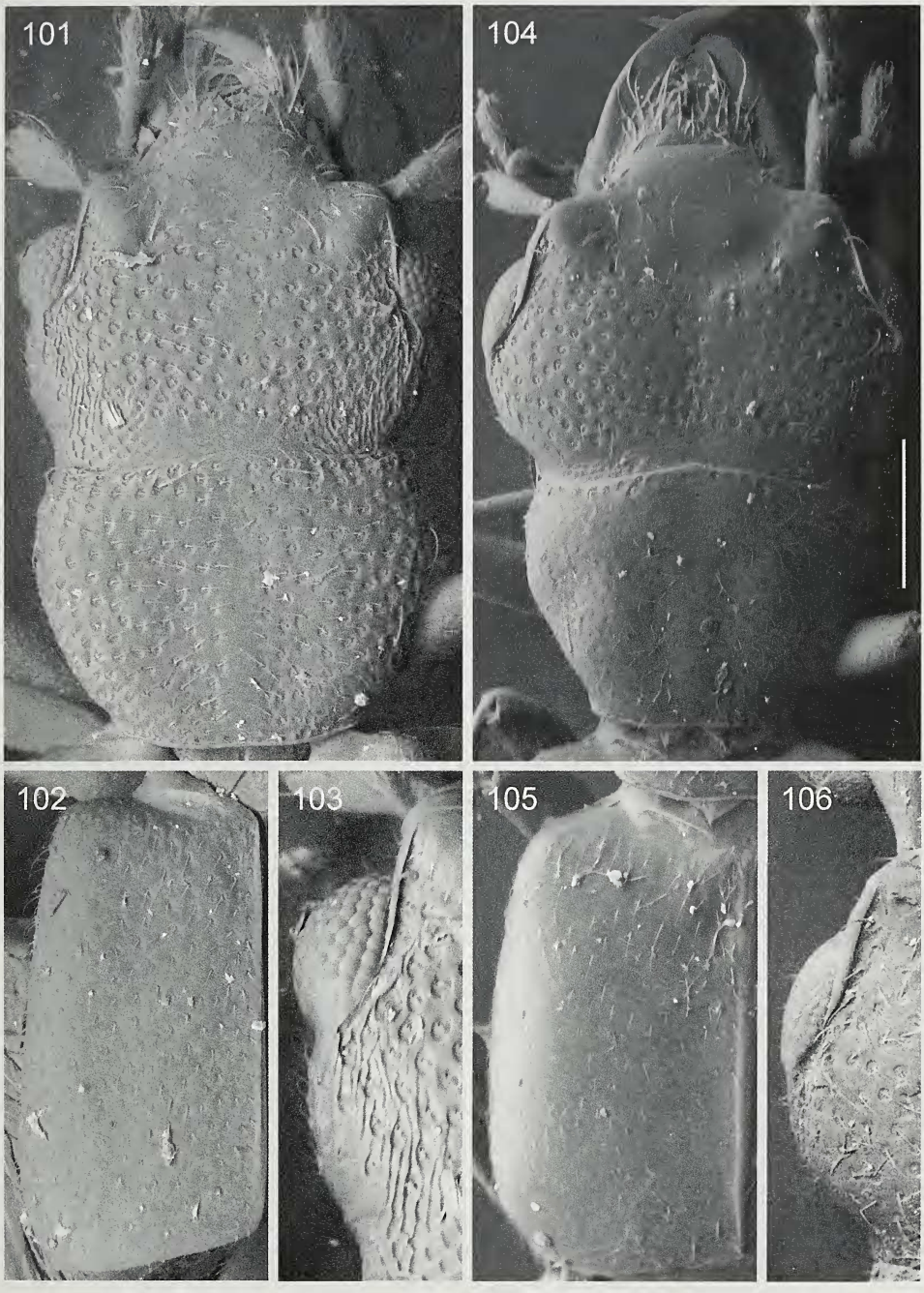
BIONOMICS: Specimens were collected by beating dead branches and from rotten palm.

Parosus major sp. nov. Figs 38, 51, 85-87, 94

TYPE MATERIAL: HOLOTYPE (♂), "PERU: Cuzco Dept., Pillahuata, Manu rd., km. 128 [13°09.5'S, 71°35.5'W], 25-IX-1982, [leg.] L. E. Watrous & G. Mazurek (FMHD #82-291), leaf litter" (FMNH). – PARATYPES (72), PERU: Cuzco Dept., Pillahuata, Manu rd., km. 128, 16.IX.1982, leg. L. E. Watrous & G. Mazurek (FMHD #82-241), ex litter under grass clumps (SMNS, 1), same but leg. L. E. Watrous & G. Mazurek (FMHD #82-233) (FMNH, 1), same but 18.IX.1982, leg. L. E. Watrous & G. Mazurek (FMHD #82-256), ex litter in dry streambed (NHMW, 1), same but 19.IX.1982, leg. L. E. Watrous & G. Mazurek (FMHD #82-262), ex leaf litter near falls (USNM, 1), same but leg. L. E. Watrous & G. Mazurek (FMHD #82-264), ex leaf litter after rain (CNCI, 1), same but 20.IX.1982, leg. L. E. Watrous & G. Mazurek (FMHD #82-266), ex litter in mossy forest (AMNH, 1), same but leg. L. E. Watrous & G. Mazurek (FMHD #82-269), ex litter in mossy forest (HNHM, 1), same but 22.IX.1982, leg. L. E. Watrous & G. Mazurek, Laboulbeniales n. 3154 Walter Rossi, from FMNH via Gy. Makranczy, Sep. 2007 (FMNH, 1), same but 27.IX.1982, leg. L. E. Watrous & G. Mazurek (FMHD #82-310), ex litter in runoff in mossy forest (HNHM, 1). – BOLIVIA, La Paz Prov., 9.2km E Chulumani, 16°20'59"S, 67°30'18"W, 2100m, 19-21.I.2001, leg. J.S. Ashe, R.S. Hanley (BOL1AH01 036), ex: flight intercept trap (SEMC, 1), same but 2200m, leg. J.S. Ashe, R.S. Hanley (BOL1AH01 038), ex: flight intercept trap (SEMC, 1), Dept. Cochabamba, Prov. Carrasco, Serrania de Siberia, Chuya Khocha [17°45'19"S, 64°47'20"W], 2300m, 2.IX.1990, leg. P. Parrillo (Field Museum, No. 122), cloud forest, in bromeliad sp. 3 (FMNH, 4), same but 29.VIII.1990, leg. P. Parrillo (No. 085, FMHD #90-187), cloud forest, bromeliad sp. 1 (FMNH, 5), same but 31.VIII.1990, leg. P. Parrillo (No. 106, FMHD #90-196), cloud forest, bromeliad sp. 1 (FMNH, 6, HNHM, 1♂), same but 2.IX.1990, leg. P. Parrillo (No. 120, FMHD #90-197), cloud forest, bromeliad sp. 1 (FMNH, 4), same but leg. M. Ledezma (No. 119, FMHD #90-251), cloud forest, bromeliad sp. 1 (FMNH, 8, MHNG, 1♀), same but 3.IX.1990, leg. P. Parrillo (No. 125, FMHD #90-199), cloud forest, bromeliad sp. 1 (FMNH, 3), same but leg. P. Parrillo (No. 126, FMHD #90-200), cloud forest, bromeliad sp. 1 (FMNH, 7), same but leg. M. Ledezma (No. 131, FMHD #90-204), cloud forest, bromeliad sp. 3 (FMNH, 3), same but leg. M. Ledezma (No. 132, FMHD #90-205), cloud forest, bromeliad sp. 3 (FMNH, 4, HNHM, 1), same but leg. M. Ledezma (No. 136, FMHD #90-254), cloud forest, bromeliad sp. 3 (FMNH, 2, MHNG, 1), same but 4.IX.1990, leg. M. Ledezma (No. 138, FMHD #90-207), cloud forest, bromeliad sp. 3 (FMNH, 6, BMNH, 2, ZMHB, 1, ISNB, 1), Santa Cruz Prov., Comarapa, 32.8km NW Yungas de Siberia, 17°49'24" S, 64°42'26" W, 27.I.1999, leg. R. Anderson (BOL1A99 001), ex: litter berlese (SEMC, 1).

DESCRIPTION: Habitus as in Fig. 51. Measurements (n=10): HW = 1.02 (0.94-1.10); TW = 1.06 (0.95-1.17); PW = 0.97 (0.85-1.07); SW = 0.93 (0.86-0.97); MW = 1.13 (1.06-1.20); AW = 0.93 (0.82-1.01); HL = 0.80 (0.72-0.85); EL = 0.19 (0.17-0.21); FL = 0.13 (0.12-0.14); TL = 0.34 (0.28-0.38); PL = 0.70 (0.62-0.77); SL = 1.03 (0.99-1.09); SC = 1.01 (0.97-1.06); FB = 2.63 (2.46-2.79); BL = 4.66 (4.24-5.01) mm. Body 'unicoloured', but with strikingly (uniformly) reddish elytra. Head and pronotum blackish dark brown to pitch black (supraantennal prominences appear a little lighter), elytra uniformly reddish medium brown, abdomen dark brown, with slight reddish overtone and sometimes lightening tergal apices. Legs, mouthparts and antennae strongly reddish medium brown, latter distinctly darkening from middle to penultimate antennomere. Pubescence medium short and sparse, shorter on elytra. A rather shiny species (unpunctured areas not so sharply separated from punctured ones).

Head and pronotum. Mid-antennal articles about as long as wide (antennomere 6 length:width = 0.106:0.108 mm). Clypeus (Fig. 85) trapezoid, ratio of longitudinal distance of supraantennal prominence tip from eyefront to the same from clypeal front



FIGS 101-106

(101-103) *Parosus minutus* sp. n.; head and pronotum (101), elytron (102), side of head (103). (104-106) *P. skalitzkyi* sp. n.; head and pronotum (104), elytron (105), side of head (106). All SEM, dorsal views. Scale bar = 0.08 mm for 103, 0.15 mm for 101,102, 0.17 mm for 106, 0.2 mm for 105, 0.25 mm for 104.

= 0.39. Infraocular ridge (Fig. 87) rather strong, ending at a strong and shiny postocular process at posterior edge of eye. Temple rather straight anteriorly, most curved after middle (slightly angled). Pronotum (Fig. 85) with maximum width 1.73-1.74x base width, sides almost evenly arched, but in anterior 1/5 more strongly, anterior angles sharp. Clypeus and supraantennal prominences unpunctured, shiny. Frontoclypeal groove shallow, reached by the umbilicate puncture field of vertex. In hind part of vertex with a rather deeply impressed area (at its anterior parts punctation more sparse). Anterior half of pronotal midline (except a small area behind anterior margin) deeply impressed, unpunctured, forming a posteriorly directed arrowhead shape with scabrous microsculpture in it. Posterior half being a slightly elevated, unpunctured, shiny stripe with two longitudinal depressions along its sides. Laterad, two spots rather elevated and shinier. Pronotal sides with some impression around middle. Head with 22-24 'longitudinal' puncture lines, very rough punctation, on mid-vertex more sparse, pronotum with 22-26 'longitudinal' puncture lines, smaller punctures compared to those on head, lateral elevations with loosened punctation.

Elytra and abdomen. Elytra (Fig. 86) dilating posteriorly, with two small, longitudinal impressions behind scutellum. Medially serrate fringe present on hind margin of tergite VII. Elytral punctation not umbilicate, punctures smaller than those on pronotum, interspaces about 2/5-3/4 of puncture diameters. Bases of abdominal tergites (posterior to basal ridges) with very fine transversal coriaceous microsculpture, segments almost without punctation. Aedeagus as in Fig. 94.

ETYMOLOGY: The species is named after its unusually large size.

COMPARATIVE NOTES: From the similarly large 'unicoloured' species (*P. longicornis*, *P. unicoloratus*, *P. gigantulus*), this one is easily distinguished by the elytra being uniformly lighter (reddish-brownish) than the head and pronotum. It has moderately elongate antennae, a large but on the vertex mostly convex head. Amongst the mentioned species this has the most coarse punctation on the head, which remains dense (mostly) on the anteior vertex, too.

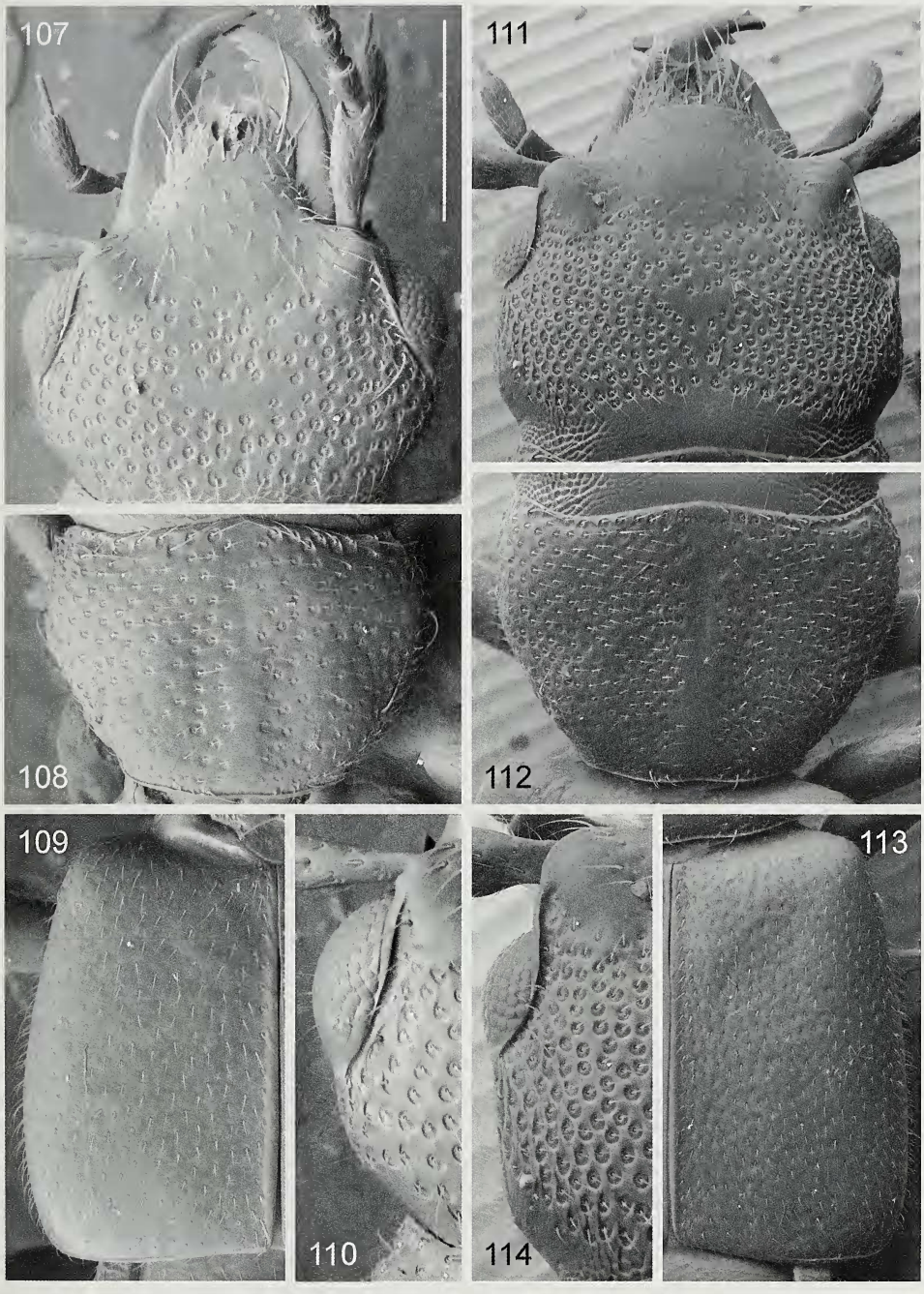
DISTRIBUTION: The species is known from the highest southern ranges of the Cordilleras (in Peru and Bolivia).

BIONOMICS: Specimens were collected from different types of (leaf) litter in cloud forest by Berlese sampling and other methods.

Parosus minutus sp. nov. Figs 95, 101-103, 135

TYPE MATERIAL: HOLOTYPE (♂), "PANAMA, [Prov.] Panama, Cerro Azul [9°10'01"N, 79°24'54"W], ca. 2000', Feb. 21.1976, [leg.] A. Newton, wet debris, small forest stream" (FMNH). – PARATYPE (1), PANAMA: Prov. Panama, Cerro Campana, 3200' [8°41'15"N, 79°55'19"W], 14-23.II.1976, leg. A. Newton, berlese - cloud forest leaf litter (FMNH, 1).

DESCRIPTION: Habitus as in Fig. 135. Measurements (n=2): HW = 0.41 (0.39-0.42); TW = 0.39 (0.38-0.40); PW = 0.38 (0.37-0.39); SW = 0.39 (0.38-0.39); MW = 0.47 (0.46-0.47); AW = 0.41 (0.39-0.43); HL = 0.31 (0.30-0.31); EL = 0.10 (0.10-0.10); FL = 0.09 (0.08-0.09); TL = 0.11 (0.10-0.12); PL = 0.29 (0.28-0.29); SL = 0.45 (0.43-0.47); SC = 0.44 (0.41-0.46); FB = 1.08 (1.05-1.11); BL = 2.06 (2.00-2.12) mm. Body predominantly 'unicoloured', but with light elytra. Head blackish dark brown



FIGS 107-114

(107-110) *Parosus portobelo* sp. n.; head (107), pronotum (108), elytron (109), side of head (110). (111-114) *P. rossii* sp. n.; head (111), pronotum (112), elytron (113), side of head (114). All SEM, dorsal views. Scale bar = 0.16 mm for 110, 0.2 mm for 114, 0.25 mm for 107-109, 0.35 mm for 111-113.

(supraantennal prominences appear much lighter, yellowish), pronotum dark brown, elytra light brown except scutellar area to shoulders darker (poorly delimited). Abdomen dark brown (with the posterior margin of tergites somewhat lighter). Legs, mouthparts and antennae yellow to light brown with the middle darkened (medium brown) until the penultimate antennomere. Pubescence rather short and relatively sparse (this being by far the smallest species), with longer setae on the abdomen. Rather shiny species, punctured areas not separating sharply.

Head and pronotum. Mid-antennal articles about as long as wide (antennomere 6 length:width = 0.046:0.045 mm). Clypeus (Fig. 101) broad trapezoid, ratio of longitudinal distance of supraantennal prominence tip from eyefront to the same from clypeal front = 0.50-0.64. Infraocular ridge (Fig. 103) fine, ending in a very short keel at posterior edge of eye. Temple almost evenly curved, but most curved in the middle. Pronotum (Fig. 101) with maximum width 1.58-1.66x base width, sides convex, curved all the way, but most in anterior third, anterior angles rather sharp. Clypeus and supraantennal ridges almost unpunctured, shiny. Clypeal area poorly delimited, frontoclypeal groove almost absent, marked only as a border between unpunctured and punctured areas. Vertex not visibly impressed, but in middle a spot more sparsely punctured, shiny and a little elevated. Posterior part of pronotal midline an elevated and shiny stripe. Around it disc slightly depressed, especially at anterior part of midline which stands out as unpunctured. Pronotal sides with impressions around the middle. Head with 16-20 'longitudinal' puncture lines, pronotum with 16-18 'longitudinal' puncture lines, anterior vertex more loosely punctured.

Elytra and abdomen. Elytra (Fig. 102) dilating posteriorly, with two small, longitudinal, rather deep impressions behind scutellum. Medially serrate fringe present on hind margin of tergite VII. Head, pronotum and elytra with similarly sized punctures, but elytral punctation not umbilicate, interspaces about 1/3-2/3 of puncture diameters. Bases of tergites (posterior to basal ridges) (also) without microsculpture, segments with tiny, scattered punctures. Aedeagus as in Fig. 95.

ETYMOLOGY: The specific epithet refers to this taxon being by far the smallest species.

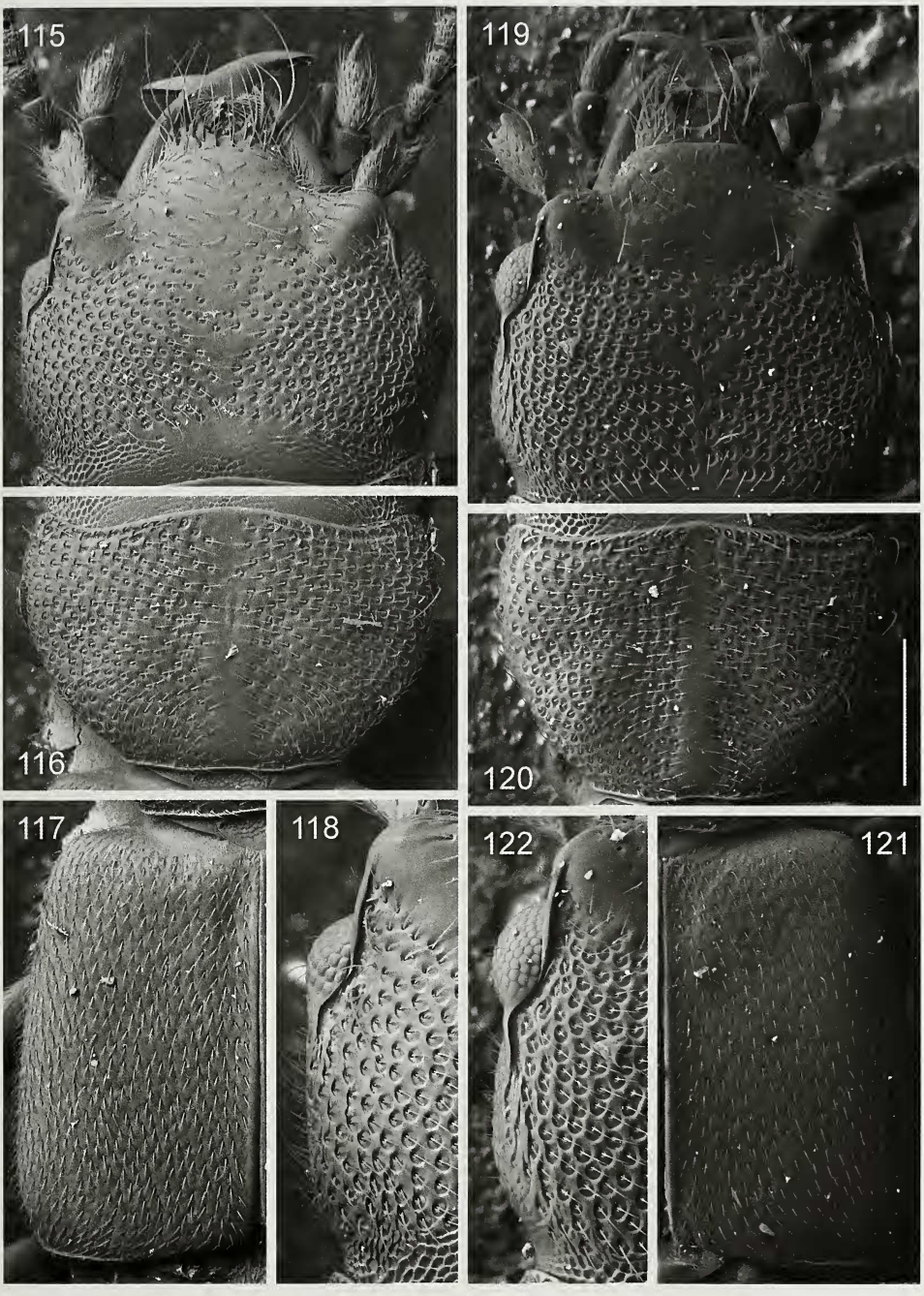
COMPARATIVE NOTES: Easy to distinguish from all other known *Parosus* by its small size alone.

DISTRIBUTION: The species is known only from a pair of specimens collected in Panama (Prov. Panama) at different localities. These being the only ones in their repectives samples suggest rarity.

BIONOMICS: Collected from wet debris near a small forest stream, also by Berlese sampling of leaflitter in a cloud forest.

Parosus newtoni sp. nov. Figs 97-100, 132, 138

TYPE MATERIAL: HOLOTYPE (♂), "PANAMA, [Prov.] Bocas d. Toro, Fortuna / Chiriquí Grande road, 8°47'N, 82°11'W, 800m, 14-16.VII.1987, [leg.] D. M. Olson (#566), premontane rain forest, sifting litter, Field Museum N. H., David M. Olson, Staphylinidae species #73" (FMNH). – PARATYPES (4), PANAMA, Prov. Bocas del Toro, Fortuna / Chiriquí Grande road, 1050m, 8°47'N, 82°12'W, 12-14.VII.1987, leg. D. M. Olson (#523), premontane rain forest, sifting litter, Field Museum N. H., David M. Olson, Staphylinidae species #73 (FMNH, 1,



FIGS 115-122

(115-118) *Parosus simplex* sp. n.; head (115), pronotum (116), elytron (117), side of head (118). (119-122) *P. taliaferroae* sp. n.; head (119), pronotum (120), elytron (121), side of head (122). All SEM, dorsal views. Scale bar = 0.15 mm for 118, 122, 0.23 mm for 119-121, 0.25 mm for 115-117.

MHNG, 1), [Prov. Panamá,] Cerro Campana [8°41'15"N, 79°55'19"W], 6.VII.1974, leg. C.W. & L. O'Brien (FSCA, 1), [Prov. Panamá,] Cerro Campana, 01.VIII.1970, leg. J. M. Campbell (CNCI, 1).

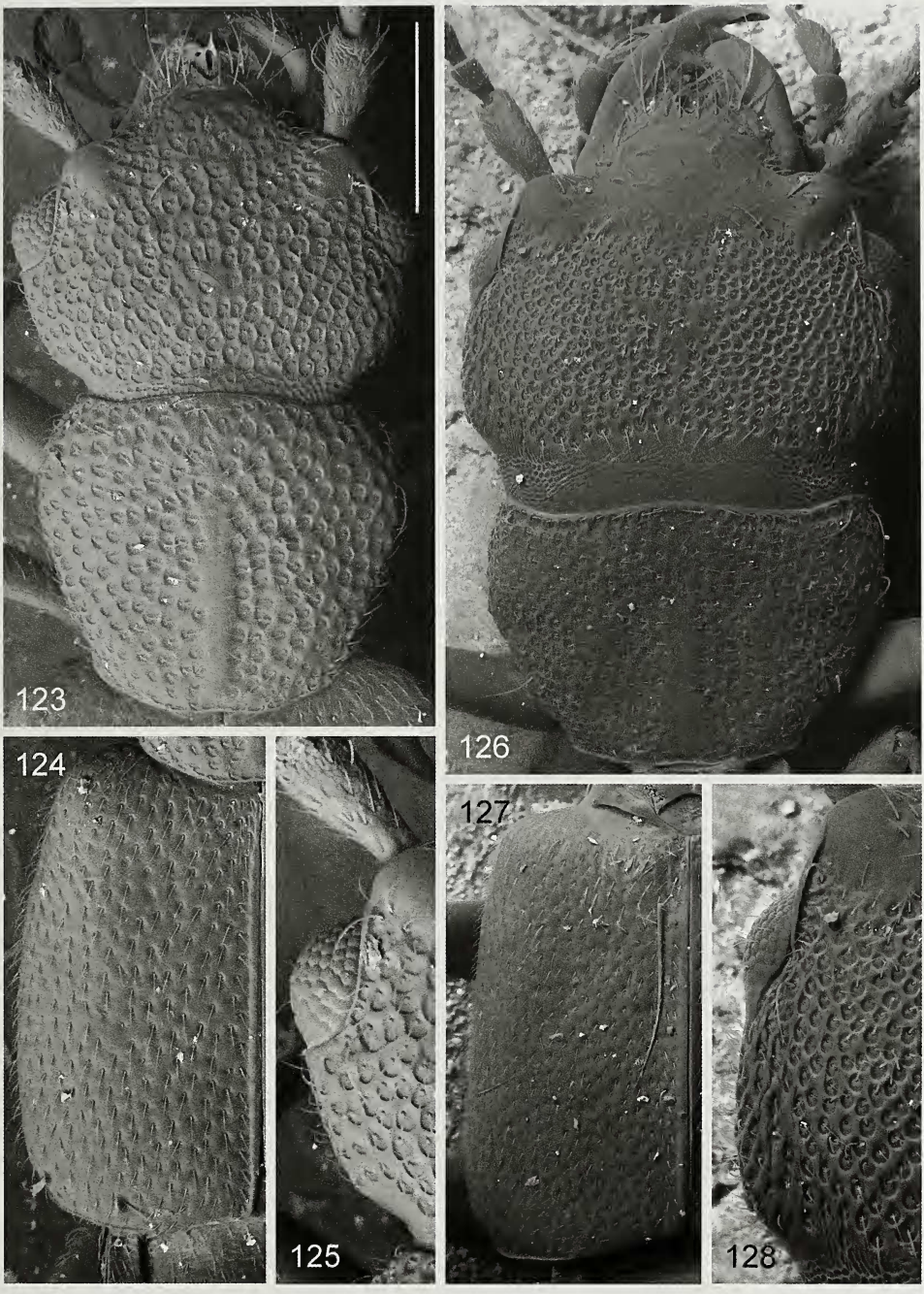
DESCRIPTION: Forebody as in Fig. 132. Measurements (n=5): HW = 0.78 (0.74-0.84); TW = 0.80 (0.75-0.86); PW = 0.65 (0.62-0.69); SW = 0.63 (0.59-0.67); MW = 0.78 (0.75-0.84); AW = 0.63 (0.61-0.66); HL = 0.55 (0.50-0.59); EL = N/A; FL = 0.13 (0.12-0.14); TL = 0.25 (0.24-0.27); PL = 0.46 (0.44-0.48); SL = 0.68 (0.64-0.71); SC = 0.66 (0.62-0.69); FB = 1.78 (1.71-1.86); BL = 3.07 (2.97-3.30) mm. [Holotype teneral, so colour description is based on paratype from Cerro Campana (deposited in CNCI)]. Body 'bicoloured'. Head reddish dark brown (front of clypeal region and supraantennal prominences appear much lighter, yellowish, infraocular ridge blackish), pronotum yellow to light brown, elytra medium brown except shoulder area (not delimited) lighter, darkening towards apex. Abdomen yellow to light brown, darkening towards apex. Legs, mouthparts and antennae yellow to light brown. Pubescence rather sparse with very fine hairs, abdomen with longer setation.

Head and pronotum. Mid-antennal articles moderately elongate (antennomere 6 length:width = 0.074:0.060 mm). Clypeus (Fig. 98) basally broad trapezoid, ratio of longitudinal distance of supraantennal prominence tip from eyefront to the same from clypeal front = 0.40-0.53. Infraocular ridge (Fig. 100) fine, in an angle continuing into a triangular postocular process. Temple fully and very broadly curved, outline of eye fitting perfectly into this arch. Pronotum (Fig. 98) with maximum width 1.85x base width (anterior part very transverse), anteriorly sides weakly rounded, anterior angles appear sharp (dorsal view). Behind clypeal area with a shallow, transversal, slightly V-shaped impression, on posterior part of vertex a rather deep concavity. On pronotal disc anterior 1/4 of the midline longitudinally impressed, similar longitudinal (parallel) impressions from anterior 1/4 along posterior half of midline, not so shiny, but elevated. Obtuse concavities from sides of disc to sides of whole pronotum, sligtly posteriorly directed. Clypeal area and supraantennal prominences without punctation, shiny. Posterior half of pronotal midline elevated, but only parts of it rather shiny. Head with 30-32 'longitudinal' puncture lines, pronotum with about 24 'longitudinal' puncture lines, loosened punctation on anterior vertex, pronotum with somewhat smaller punctures than on head.

Elytra and abdomen. Elytra (Fig. 99) dilating posteriorly, impressions behind scutellum rather deep. Medially serrate fringe present on hind margin of tergite VII. Elytral punctation not umbilicate, a little finer than on head, interspaces about 3/4-1 of puncture diameters. Bases of tergites (posterior to basal ridges) without apparent microsculpture, segments with small, very scattered punctures. Aedeagus as in Fig. 138.

ETYMOLOGY: The species is named in honor of Dr. Alfred Newton of the Field Museum of Natural History (Chicago) who made an especially important contribution to the systematics of Oxytelinae.

COMPARATIVE NOTES: This species has a unique eye formation: the postocular process is so strongly developed that it forms a perfect arch with the eyes and the temples. Similar (but no so perfect) arch can be found in *P. brasilianus* (with much less



FIGS 123-128

(123-125) *Parosus thayerae* sp. n.; head and pronotum (123), elytron (124), side of head (125). (126-128) *P. unicoloratus* sp. n.; head and pronotum (126), elytron (127), side of head (128). All SEM, dorsal views. Scale bar = 0.15 mm for 125, 0.25 mm for 123, 124, 128, 0.4 mm for 126, 127.

transverse pronotum anterior, see details under *P. brasilianus*) and *P. skalitzkyi* (a 'uni-coloured' species with tiny, scattered punctures on the elytra).

DISTRIBUTION: The species is known only from Panama (Prov. Bocas del Toro and Prov. Panamá).

BIONOMICS: Specimens were collected by sifting litter in premontane rain forest.

Parosus portobelo sp. nov. Figs 24, 107-110, 136, 139

TYPE MATERIAL: HOLOTYPE (♂), "[PANAMA:] [Colon Prov.,] PortoBello [=Portobelo, 9°33'N, 79°39'W], Pan Mar 4? [19]11, [leg.] E. A Schwarz" (AMNH). – PARATYPES (12), PANAMA: Colon Prov., Portobelo, 26.II.1911, leg. E. A Schwarz, (AMNH, 1), same but 12.III.1911, leg. E. A Schwarz, (AMNH, 1), Coclé Prov., 7.2km NE El Copé, 730m, 08°37' N, 80°35' W, 20.V-7.VI.1995, leg. J. Ashe, R. Brooks (#140), ex: flight intercept trap (SEMC, 1). – COSTA RICA, Puntarenas Prov., Península de Osa, 7km W Rincón, Est.[ación] F.[undación] N.[Neotrópica] Aguas Buenas [8°41'N, 83°30'W], 50m, 21-25.VI.1997, leg. S. & J. Peck (CR1P97 025), flight intercept trap (SEMC, 1), Heredia Prov., La Selva Biol. Res. Sta., 3.2km SE Puerto Viejo [de Sarapiqui] [10°25'45"N, 83°58'52"W], 100m, 19.II.1992. leg. W. Bell, flight intercept trap (SEMC, 1), Heredia Prov.: La Selva Biol. Station nr. Puerto Viejo de Sarapiqui [10°25'53"N, 84°00'20"W, 50m], 18.II.1985, leg. L. Herman (#2111), beating trees and shrubs (AMNH, 1), same but leg. L. Herman (#2120), beating trees and shrubs (AMNH, 2), same but leg. L. Herman (#2123), at the shore of a stream (AMNH, 1), Heredia Prov.: La Selva Biol. Station nr. Puerto Viejo de Sarapiqui, 18.II.1985, leg. L. Herman (#2124), beating trees and shrubs (AMNH, 2, MHNG, 1).

DESCRIPTION: Habitus as in Fig. 136. Measurements (n=5): HW = 0.58 (0.54-0.62); TW = 0.55 (0.52-0.60); PW = 0.51 (0.49-0.56); SW = 0.51 (0.48-0.56); MW = 0.61 (0.58-0.66); AW = 0.56 (0.54-0.57); HL = 0.41 (0.39-0.44); EL = 0.14 (0.14-0.15); FL = 0.12 (0.12-0.13); TL = 0.13 (0.12-0.15); PL = 0.39 (0.35-0.42); SL = 0.56 (0.54-0.61); SC = 0.54 (0.52-0.59); FB = 1.42 (1.34-1.53); BL = 2.55 (2.31-2.83) mm. Body 'bicoloured'. Head reddish medium to dark brown (supraantennal prominences appear lighter, almost orange, front of clypeal region medium brown to orange, infraocular ridge dark brown, mediad of supraantennal prominences with two little darker spots). Pronotum orange to light brown, elytra medium to dark brown except shoulder sometimes lighter, darkening towards apex. Abdomen light brown, gradually darkening towards apex (tergites VII-VIII dark brown). Legs, mouthparts and antennae light brown. Pubescence short and rather sparse, but more dense on elytra and much longer on abdomen.

Head and pronotum. Mid-antennal articles about as long as wide (antennomere 6 length:width = 0.050:0.049 mm). Clypeus (Fig. 107) trapezoid, ratio of longitudinal distance of supraantennal prominence tip from eyefront to the same from clypeal front = 0.28-0.33. Infraocular ridge (Fig. 110) fine but well visible, ending in a small, shiny postocular process and short keel behind posterior edge of the eye. Temple curved, most strongly in the middle, with eye more or less bulging. Pronotum (Fig. 108) with maximum width 1.72-1.78x base width, sides strongly but evenly curved in the anterior half, straight (or almost so) posteriorly, anterior angles sharp. Clypeus and supra-antennal ridges almost unpunctured, shiny. Frontoclypeal groove well visible, medium deep, reached by the umbilicate punctation. Middle of vertex slightly elevated with more sparse punctation (consequently more shiny), posteriorly and anteriorly slightly

FIGS 129-134

Forebodies of new *Parosus* species. *P. longipennis* sp. n. (129), *P. simplex* sp. n. (130), *P. taliaferroae* sp. n. (131), *P. newtoni* sp. n. (132), *P. thayerae* sp. n. (133), *P. unicoloratus* sp. n. (134).

depressed, latter continued into the shallow frontoclypeal transversal depression. Posterior pronotal midline a shiny, elevated, unpunctured stripe, anteriad and along its two sides with longitudinal depressions. Pronotal sides with impressions around the middle. Head with 20-22 'longitudinal' puncture lines, pronotum with 20-22 'longitudinal' puncture lines, a loosened transversal area mid-vertex.

Elytra and abdomen. Elytra (Fig. 109) slightly dilating posteriorly, with two small, roundish impressions behind scutellum. Medially serrate fringe present on hind margin of tergite VII. Head, pronotum and elytra with roughly the same sized punctures, but elytral punctation not umbilicate, interspaces about 1/3-2/3 of puncture diameters. Bases of tergites (posterior to basal ridges) almost without any microsculpture, segments with a few small, scattered punctures. Aedeagus as in Fig. 139.

ETYMOLOGY: The specific epithet is the locality of the holotype, noun in apposition.

COMPARATIVE NOTES: Of the similarly 'bicoloured' and small-sized species (*P. longipennis* and *P. brasilianus*) it can be distinguished by the combination of the bulging eyes and elongate antennae (*P. longipennis* has stouter antennae, while the eyes of *P. brasilianus* are not so much bulging).

DISTRIBUTION: The species is known from two pairs of localities in Costa Rica and in Panama, respectively.

BIONOMICS: The known specimens were either beaten from branches or captured in flight intercept traps. The single exemplar from a streambank must be a chance occurence.

Parosus rossii sp. nov. Figs 111-114, 137, 140

TYPE MATERIAL: HOLOTYPE (♂), "ECUADOR, Cotopaxi [Prov.], Bosque Integral Otonga, 15-Sep-2007, 1961m, Ex: Fumigación F6, S 00°25' 16.5", W 079°00' 09", leg. A.C.Proaño, C.&A. Barragán" (CNCI). – PARATYPES (99), same data as holotype (HNHM, 27, AMNH, 2, FSCA, 2, ISNB, 1♂, 3, NHMW, 2, SEMC, 4, USNM, 2, ZMHB, 4, CNCI, 5, QCAZ, 6, ICNC, 1), Cotopaxi Prov., Bosque Integral Otonga, 1.VI.2007, 1975m, ex: Fumigación F1, S 00°25' 16.6", W 79°00' 20.4", leg. A.C. Proaño, C.&A. Barragán, (HNHM, 17, AMNH, 2, BMNH, 1♂, 1, MNHP, 2, SMNS, 4, USNM, 2, MHNG, 2, QCAZ, 4), Cotopaxi Prov., Canton Sigchos, Las Pampas, Bosque Integral Otonga, 2.VI.2007, leg. C. Proaño & A. Barragán, Laboulbeniales n. 3152 and 3153 Walter Rossi (FMNH, 2), Cotopaxi Prov., Canton Sigchos, Las Pampas, Bosque Integral Otonga, 15.IX.2007, leg. C. Proaño & A. Barragán, Laboulbeniales n. 3378 Walter Rossi (FMNH, 2).

DESCRIPTION: Habitus as in Fig. 137. Measurements (n=7): HW = 0.71 (0.65-0.76); TW = 0.71 (0.65-0.76); PW = 0.67 (0.62-0.72); SW = 0.66 (0.62-0.70); MW = 0.82 (0.77-0.87); AW = 0.64 (0.61-0.68); HL = 0.56 (0.50-0.60); EL = 0.14 (0.12-0.15); FL = 0.11 (0.10-0.11); TL = 0.23 (0.21-0.25); PL = 0.47 (0.42-0.50); SL = 0.74 (0.71-0.77); SC = 0.73 (0.70-0.76); FB = 1.82 (1.67-1.94); BL = 3.24 (2.73-3.72) mm. Body 'bicoloured', but with medium brown elytra. Head very dark brown to black (supra-antennal prominences only slightly lighter), pronotum strongly reddish medium brown, elytra uniformly dark brown to blackish with gently reddish overtone, abdominal base in varying extent orangeish till tergite V with posterior parts, rest of abdomen dark brown. Legs, mouthparts and antennae reddish medium brown the exception of the

FIGS 135-137
Habitus of new *Parosus* species. *P. minutus* sp. n. (135), *P. portobelo* sp. n. (136), *P. rossii* sp. n. (137).

bases of antennomeres very slightly darker. Pubescence medium short and medium dense equally on the forebody, except frons, where slightly longer and sparse, abdomen with much longer and more sparse setae.

Head and pronotum. Mid-antennal articles about as long as wide (antennomere 6 length:width = 0.068:0.068 mm). Clypeus (Fig. 111) trapezoid, ratio of longitudinal distance of supraantennal prominence tip from eyefront to the same from clypeal front = 0.41-0.45. Infraocular ridge (Fig. 114) conspicuous but rather fine, weakly continues in a short keel after the posterior edge of the eye. Temple rather straight, most curved at the posterior 2/3 (and there appear as rather angled), eye strongly bulging. Pronotum (Fig. 112) with maximum width 1.84 base width, sides curved mostly in the anterior half, but turning into the almost straight posterior half in an unbroken arch; anterior pronotal angles rather sharp. Clypeus and supraantennal ridges very shiny, with a few small, scattered punctures only, contrasting to the mostly strongly punctate vertex. Clypeus very slightly elevated, frontoclypeal groove almost indistinct, only appear as borderline to the more strongly punctured area. Posterior half of vertex very gently impressed, with a rather slight longitudinal loosening of the punctation. Posterior part of pronotal midline an elevated and shiny stripe, anteriorly continuing into a longitudinal depression with some scabrous sculpture. Along sides of midline the pronotal disc gently but broadly depressed (on both sides). Head with 28-30 'longitudinal' puncture lines, pronotum with 26-30 'longitudinal' puncture lines, on pronotum very slightly smaller punctures compared to those on head, punctation loosened in the triangle of the supraantennal prominences and the mid-vertex.

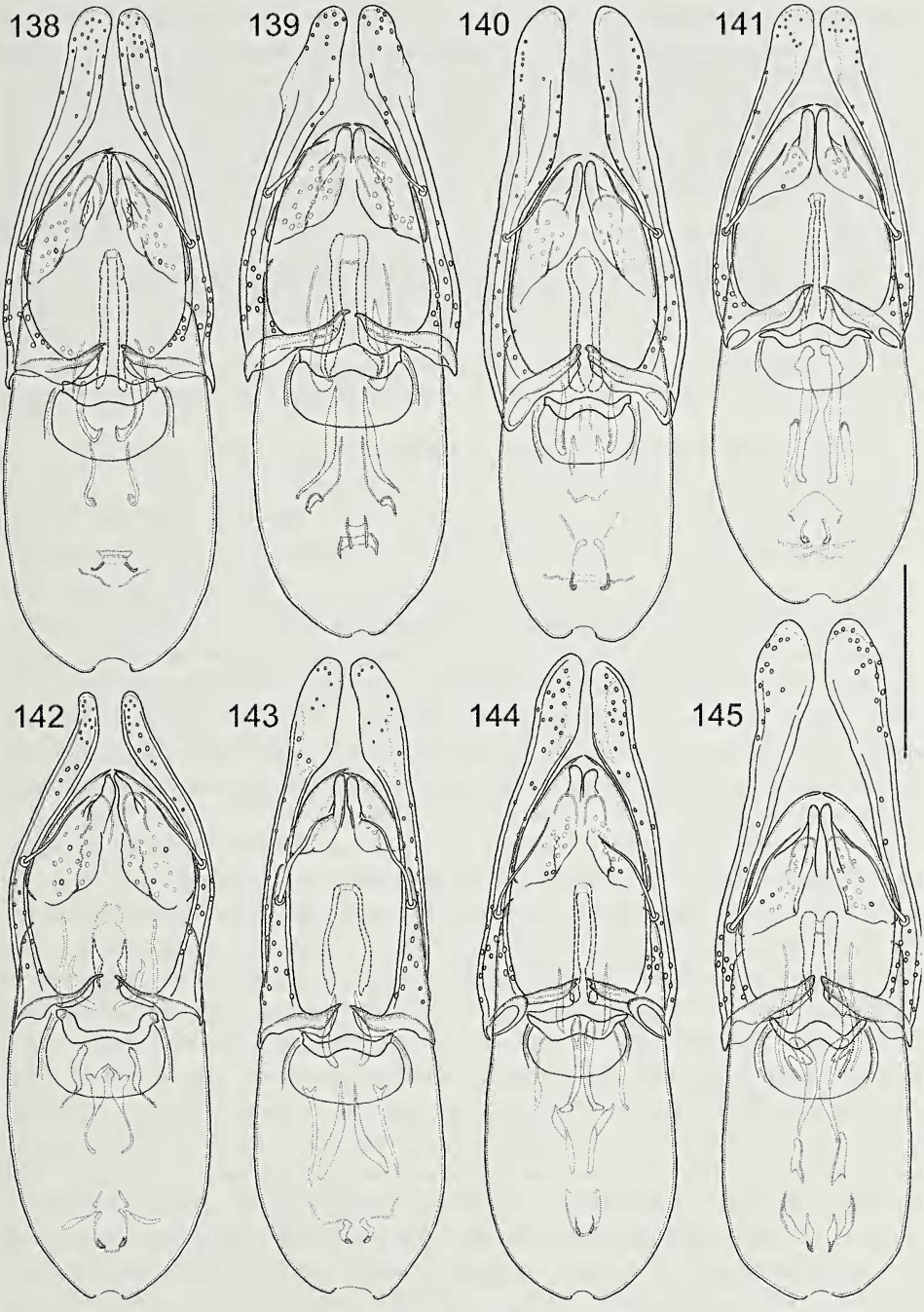
Elytra and abdomen. Elytra (Fig. 113) slightly dilating posteriorly, with two small, elongate impressions behind scutellum, scabrous sculptured. Medially serrate fringe present on hind margin of tergite VII. Elytral punctation not umbilicate, same size as on pronotum, interspaces about 1/3-1/2 of puncture diameters. Bases of tergites (posterior to basal ridges) with fine transversal coriaceous microsculpture, segments with medium fine, scattered punctures. Aedeagus as in Fig. 140.

ETYMOLOGY: The species is named after Dr. Walter Rossi, who while studying Laboulbeniales (Fungi) in Central and South America, collected very valuable material of *Parosus* that greatly added to the knowledge of the genus. This is the species referred to as *Parosus* sp. nov. in Rossi (2010), in the description of *Dimorphomyces carolinae* Rossi, 2010, a parasitic fungus.

COMPARATIVE NOTES: Of the similarly large and 'bicoloured' species (*P. hilaris*, *P. taliaferroae*, *P. bicoloratus*) this species can be distinguished by not having a delimited dark cross-stripe across the abdomen (as opposed to *P. hilaris* and *P. taliaferroae*) but possessing a medially serrate fringe on the hind margin of tergite VII with digitiform processes (lacked by *P. taliaferroe* and *P. bicoloratus*).

DISTRIBUTION: The species is known only from the type locality in Ecuador (Cotopaxi Prov.).

BIONOMICS: All the known material was collected by fogging with insecticide.



FIGS 138-145

Aedeagi, frontal views. *P. newtoni* sp. n. (138), *P. portobelo* sp. n. (139), *P. rossii* sp. n. (140), *P. simplex* sp. n. (141), *P. skalitzkyi* Bernhauer (142), *P. taliaferroae* sp. n. (143), *P. thayerae* sp. n. (144), *P. unicoloratus* sp. n. (145). Scale bar = 0.09 mm for 139, 0.10 mm for 138, 142, 144, 0.12 mm for 141, 144, 0.13 mm for 140, 145.

Parosus simplex sp. nov. Figs 115-118, 130, 141

TYPE MATERIAL: HOLOTYPE (♂), "PERU, Cuzco Dept., Consuelo, Manu rd., km. 165 [13°02'S, 71°30'W, 1050m], 1.X.1982, [leg.] L. E. Watrous & G. Mazurek (FMHD #82-318), ex litter under rotten palm" (FMNH). – PARATYPES (10), PERU, Cuzco Dept., Consuelo, Manu rd., km. 165, 1.X.1982, leg. L. E. Watrous and G. Mazurek (FMHD #82-315), ex litter at rotten logs (FMNH, 1), same but leg. L. E. Watrous and G. Mazurek (FMHD #82-318), ex litter under rotten palm (FMNH, 1), same but 4.X.1982, leg. L. E. Watrous and G. Mazurek (FMHD #82-336), ex rotten palm (FMNH, 1♂, 1), same but 5.X.1982, leg. L. E. Watrous and G. Mazurek (FMHD #82-343), ex rotten palm (FMNH, 1, MHNG, 1♂), same but 6.X.1982, leg. L. E. Watrous and G. Mazurek (FMHD #82-348), ex litter under rotten palm (FMNH, 2), same but 12.X.1982, leg. L. E. Watrous and G. Mazurek (FMHD #82-377), ex litter under rotten palm (FMNH, 1♂), same but 14.X.1982, leg. L. E. Watrous and G. Mazurek (FMHD #82-384), ex leaf litter & mushrooms (CNCI, 1♂).

OTHER MATERIAL: PERU, Cuzco Dept., Consuelo, Manu rd., km. 165, 4.X.1982, leg. L. E. Watrous & G. Mazurek (FMHD #82-336), ex rotten palm (FMNH, 1, specimen missing tip of abdomen).

DESCRIPTION: Forebody as in Fig. 130. Measurements (n=6): HW = 0.66 (0.59-0.72); TW = 0.65 (0.57-0.71); PW = 0.65 (0.59-0.70); SW = 0.59 (0.53-0.65); MW = 0.71 (0.67-0.75); AW = 0.59 (0.57-0.63); HL = 0.50 (0.45-0.55); EL = 0.12 (0.11-0.13); FL = 0.09 (0.09-0.10); TL = 0.21 (0.17-0.24); PL = 0.44 (0.40-0.46); SL = 0.65 (0.61-0.69); SC = 0.63 (0.59-0.67); FB = 1.66 (1.52-1.78); BL = 2.95 (2.71-3.16) mm. Body strongly reddish. Head and pronotum medium to dark brown (area of infraocular ridges and two medially situated spots at supraantennal prominences blackish). Elytra medium to dark brown (slightly and indefinitely darkening posteriorly), shoulder areas often lighter, orangeish. Abdomen medium to light brown (apex not conspicuously darkened), first few visible tergites often lighter, yellowish. Legs, mouthparts and antennae medium to light brown. Pubescence rather short and sparse, a little shorter and more dense on elytra.

Head and pronotum. Mid-antennal articles moderately transversal (antennomere 6 length:width = 0.053:0.065 mm). Clypeus (Fig. 115) trapezoid, ratio of longitudinal distance of supraantennal prominence tip from eyefront to the same from clypeal front = 0.60-0.81. Infraocular ridge (Fig. 118) fine, slightly continuing after posterior edge of eye in short keel. Temple broadly rounded, first half almost straight, more curved posteriorly. Pronotum (Fig. 116) with maximum width 1.81x base width, sides almost evenly rounded (convex) all the length, no straight parts, but anteriorly sometimes little more curved, anterior angles appearing sharp (in dorsal view). Shiny, almost unpunctured clypeus, not delimited (frontoclypeal groove absent, only marked by a trace of a sometimes blackish line). Supraantennal prominences shiny, unpunctured. Posterior half of vertex shallowly impressed. First half of pronotal disc shallowly impressed along midline, this impression spreading to posterior half, around a slightly elevated, shiny, unpunctured stripe in posterior half of midline. Pronotal side with a slight trace of depression around the middle. Head with 24-26 'longitudinal' puncture lines, pronotum with 24-26 'longitudinal' puncture lines, head punctation loosened on mid- and anterior vertex, on pronotum a tiny bit larger punctures than those on head.

Elytra and abdomen. Elytra (Fig. 117) slightly dilating posteriorly, behind scutellum distinct but not too deep impressions. Medially serrate fringe absent on hind

margin of tergite VII. Elytral punctation not umbilicate, punctures similar in size to the ones on head, interspaces about 1/2 of puncture diameters. Bases of tergites (posterior to basal ridges) without apparent microsculpture, segments with a few tiny, very scattered punctures. Aedeagus as in Fig. 141.

ETYMOLOGY: The species is named after its lack of contrasting colours and other peculiar traits, including absence of the very characteristic medially serrate fringe on the posterior edge of tergite VII.

COMPARATIVE NOTES: Being a 'unicoloured' species with rather light (reddish-brownish) body colour and one of only four that misses the medially serrate fringe on the hind margin of tergite VII, this is species is easy to recognize.

DISTRIBUTION: The species is so far known from a single location in the southern part of Peru (Cuzco Dept.).

BIONOMICS: Specimens were collected from (rotten) litter under palm trees.

Parosus skalitzkyi Bernhauer, 1905 Figs 39, 104-106, 142

Parosus skalitzkyi Bernhauer, 1905: 12. – Blackwelder, 1943: 103. – Herman, 1970: 400. – Herman, 2001: 1464.

TYPE MATERIAL EXAMINED: LECTOTYPE (♂, here designated), "♂ \ [Antilles,] Grand Etang [12°06'13"N, 61°41'53"W]; (Windward side) 1900 ft; Grenada, W. I.; H. H. Smith. \ skalitzkyi m. \ det. Bernhauer \ Dr. M. Bernhauer; 4.12 donavit 1936 \ ex coll.; Scheerpeltz \ Cotypus; Parosus; skalitzkyi; Bernhauer \ skalitzkyi Bernh. \ Lectotypus; Parosus; skalitzkyi Bernhauer; des. Makranczy, 2000 \ Parosus; skalitzkyi Bernhauer; det. Makranczy, 2000" (NHMW). – PARALECTOTYPES (3), same data as lectotype (NHMW, 1), "[Antilles,] Leeward side; St. Vincent [13°16'N, 61°13'W], W. I.; H. H. Smith.; 20. \ c. Eppelsh.; Steind. d. \ skalitzkyi m.; det. Bernhauer \ Co-; Typus \ Paralectotypus; Parosus; skalitzkyi Bernhauer; des. Makranczy, 2000 \ Parosus; skalitzkyi Bernhauer; det. Makranczy, 2000" (FMNH, 1), (NHMW, 1).

OTHER MATERIAL: none.

REDESCRIPTION: Measurements (n=1): HW = 0.70; TW = 0.68; PW = 0.55; SW = 0.57; MW = 0.66; AW = 0.58; HL = 0.49; EL = 0.16; FL = 0.125; TL = 0.19; PL = 0.42; SL = 0.61; SC = 0.58; FB = 1.59; BL = 2.86 mm. Body 'unicoloured'. Head, pronotum, elytra and abdomen reddish dark brown, only clypeal area, supraantennal prominences, pronotum, shoulder area and posterior margins of tergites a tiny bit lighter. Legs, mouthparts and antennae medium brown, with first three antennomeres rather yellowish and from middle of fourth antennomere darkened (medium to dark brown) to base of last antennomere. Pubescence medium short and rather sparse. Quite shiny species, punctured areas not separating sharply.

Head and pronotum. Mid-antennal articles about as long as wide (antennomere 6 length:width = 0.054:0.055 mm). Clypeus (Fig. 104) trapezoid, ratio of longitudinal distance of supraantennal prominence tip from eyefront to the same from clypeal front = 0.53-0.55. Infraocular ridge (Fig. 106) stronger anteriorly, finer posteriorly, ending in a short keel at posterior edge of eye. Temple very evenly curved, but eye bulging a little from this arch. Pronotum (Fig. 104) with maximum width 1.57-1.67x base width, sides curved in anterior half, straight posteriorly, anterior angles slightly sharp (strongly curved sides near the angle). Clypeus and supraantennal ridges unpunctured, shiny. Frontoclypeal groove strong, rather deep, posteriorly continuing in (sometimes

furrow-like) longitudinal depression dividing vertex into two halves. Pronotal midline anteriorly with a flat, sparsely punctured area and continuing posteriorly from middle as shiny, unpunctured stripe. On both sides of it two longitudinal impressions, all a little steplike broken in the middle (step sometimes continuing laterally in imressions on sides of pronotal disc). Laterad of posterior midline, outside longitudinal impressions with two elevated areas. Pronotal sides impressed around middle. Head with 18-22 'longitudinal' puncture lines, well-defined umbilicate punctures, punctation somewhat sparser on mid- and anterior vertex. Pronotum with about 18 poorly defined 'longitudinal' puncture lines (better visible at longitudinal elevations), with punctures of uneven sizes, usually smaller than those on head.

Elytra and abdomen. Elytra (Fig. 105) slightly dilating posteriorly, with two small, longitudinal, rather deep impressions behind scutellum. Medially serrate fringe present on hind margin of tergite VII. Elytra with only tiny and very scattered punctures, surface covered by microsculpture: cobweb-like fine scratches. Abdominal segments have no apparent microsculpture, only tiny punctures. Aedeagus as in Fig. 142.

COMPARATIVE NOTES: Compared to *P. antillarum*, the other species living in the Lesser Antilles, it has larger, less bulging eyes, furrow divides the vertex into two halves and the elytra is strongly punctured. Compared to the two other similar sized species that have similar eye formation (strong postocular processes), from *P. newtoni* and *P. brasilianus* it can be distinguished by the 'unicoloured' body and the characteristic tiny, scattered punctures of the elytra.

DISTRIBUTION: The species is known from the Lesser Antilles (only the type material).

BIONOMICS: Unknown.

NOTE: Since the lectotype looks rather different from the other known specimens, and is the only male in the type series, it seems safer to base the description and the measurements on this specimen only. In lack of other male specimens, it is impossible to know about the range of intraspecific variation.

Parosus taliaferroae sp. nov. Figs 26, 32-34, 119-122, 131, 143

TYPE MATERIAL: HOLOTYPE (♂), "PANAMA, Coclé Prov., El Copé, Atlantic Slope, 08°37'N, 80°35'W, 730m, 19-20 Nov.1994, [leg.] D. Windsor, C. Edwards, ex: flight intercept trap" (SEMC). – PARATYPES (8), PANAMA, Bocas d. Toro Prov., Fortuna/Chiriquí Grande road, 8°47'N, 82°11'W, 800m, 14-16.VII.1987, leg. D.M. Olson, premontane rain forest, sifting litter (FMNH, 1♀, CNCI, 1♀), Chiriquí Prov., La Fortuna, "Hydro. Trail" 08°42'N, 82°14'W, 1150m, 23.V.-9.VI.1995, leg. J. Ashe, R. Brooks (#156), ex: flight intercept trap (SEMC, 1♀), Chiriquí Prov., La Fortuna, "Cont. Divide Trail", 08°46'N, 82°12'W, 1150m, 9.VI.1995, leg. J. Ashe, R. Brooks (#159), ex: rotten elephant ear leaves (SEMC, 1♀), Coclé Prov., 7.2km NE El Copé, 08°37'N, 80°35'W, 730m, 20.V.-7.VI.1995, leg. J. Ashe, W. Brooks (#140), ex: flight intercept trap (SEMC, 2♀, MHNG, 1♀), Coclé Prov., 7.0km N El Valle, 08°36'N, 80°07'W, 810m, 19.V.1995, leg. J. & A. Ashe (#023), ex: Heliconia flowers (SEMC, 1♀).

DESCRIPTION: Forebody as in Fig. 131. Measurements (n=2): HW = 0.68 (0.65-0.70); TW = 0.69 (0.66-0.71); PW = 0.66 (0.63-0.68); SW = 0.61 (0.57-0.65); MW = 0.72 (0.70-0.73); AW = 0.63 (0.60-0.66); HL = 0.55 (0.51-0.59); EL = 0.15 (0.13-0.17);

FL = 0.12 (0.10-0.13); TL = 0.25 (0.24-0.25); PL = 0.45 (0.43-0.46); SL = 0.67 (0.63-0.71); SC = 0.65 (0.60-0.69); FB = 1.74 (1.64-1.84); BL = 3.21 (2.87-3.54) mm. Body 'bicoloured' (usually less bright, less contrasting than *P. hilaris*). Head dark brown, supraantennal prominences and front of clypeus appear much lighter, reddish light or medium brown, mediad of supraantennal prominences two larger black spots near ends of frontoclypeal (= epistomal) sulcus, pronotum reddish light brown (sometimes almost orange), elytra dark brown except shoulder area (well delimited, from scutellum to 2/5 of elytra) lighter (yellow to light brown). Abdomen yellow to light brown, tergites V-VI darkened (medium brown). Legs, mouthparts and antennae yellow to light brown. Pubescence medium short (elytra shortest) and rather dense (especially head and to lesser extent pronotum), longer and more sparse on abdomen.

Head and pronotum. Mid-antennal articles about as long as wide (antennomere 6 length:width = 0.062:0.060 mm). Clypeus (Fig. 119) trapezoid, ratio of longitudinal distance of supraantennal prominence tip from eyefront to the same from clypeal front = 0.50-0.55. Infraocular ridge (Fig. 122) strong, ending in an elevated triangular part of a smaller, shiny postocular stripe and a posteriorly vanishing keel after posterior edge of eye. Temple almost straight (slightly dilating) long after eye, but rather angled at posterior 1/4 or just strongly curved in posterior half, eye strongly bulging. Pronotum (Fig. 120) with maximum width 1.85-1.97x base width, sides curved all the way, most strongly anteriorly, anterior angles sharp. Clypeus and supraantennal ridges almost unpunctured, shiny (only a few tiny, scattered punctures). Vertex slightly depressed along an indistinct longitudinal midline, middle of vertex sometimes more shiny (more sparse punctation, confluent interspaces) V- or arrowhead-shaped. Pronotal midline as a V-shaped shiny elevation, lines becoming finer and vanishing anteriorly (between them microsculpture), not reaching anterior edge. Laterad two longitudinally elongate impressions, with two elevated shiny spots at their outer middle. Pronotal sides with slight impressions around the middle. Head with 26-28 'longitudinal' puncture lines, pronotum with about 24 'longitudinal' puncture lines, punctation indefinitely loosened around midline of (head) disc, pronotum with similar puncture sizes as those on head.

Elytra and abdomen. Elytra (Fig. 121) slightly dilating posteriorly, with two small, slightly elongate, rather deep impressions behind scutellum. Medially serrate fringe absent on hind margin of tergite VII (Fig. 26). Elytral punctation not umbilicate, puncture sizes almost same as on pronotum, or a little smaller, interspaces about 2/3-1/2 of puncture diameters. Almost no visible microsculpture on bases of abdominal tergites (posterior to basal ridges), segments with a few small, scattered punctures only. Aedeagus as in Fig. 143, spermatheca as in Fig. 34.

ETYMOLOGY: The species is named in honor of Sara Taliaferro, an illustrator with the Snow Entomological Museum at the time of my starting as a PhD student there, this is also to acknowledge the contribution she made to my scientific career.

COMPARATIVE NOTES: Most similar to *P. hilaris*, but lacks the medially serrate fringe on the hind margin of tergite VII. The punctation of the head and pronotum is slightly more dense than in *P. hilaris*. From the more distantly similar *P. bicoloratus* (which also lacks the medially serrate fringe on the hind margin of tergite VII) it can

be distinguished by the differently positioned abdominal darkening (see details under *P. bicoloratus*) and less elongate antennae. From *P. rossii* it can be separated by a light abdominal apex (*P. rossii* has dark apex) as well as the absence of the medially serrate fringe on the hind margin of tergite VII in *P. rossii*.

DISTRIBUTION: The species is so far known from a series of specimens collected in Panama.

BIONOMICS: Specimens were gathered primarily by sifting leaflitter but also by flight intercept traps and from various decaying and other vegetable materials.

Parosus thayerae sp. nov. Figs 123-125, 133, 144

TYPE MATERIAL: HOLOTYPE (♂), "PERU, Huánuco Dept., N side Cerro Carpish, 2400 m, vic. Chinchao, site 670 [9°40'07"S, 76°04'00"W], 9-15.I.1983, [leg.] A. Newton & M. Thayer, cloud forest, window trap" (FMNH). – PARATYPES (3), PERU, Huánuco Dept., N side Cerro Carpish, vic. Chinchao, 2400m, site 670, 9-15.I.1983, leg. A. Newton & M. Thayer, cloud forest, window trap (MHNG, 1♀), Huánuco Dept., N side Cerro Carpish, vic. Chinchao, 2420m, site 675 [9°40'09"S, 76°04'00"W], 12-15.I.1983, leg. A. Newton & M. Thayer, cloud forest, window trap (FMNH, 1♂), Huánuco Dept., Cordillera Azul, 39 km NE Tingo María, trap site 672 [8°57'37"S, 75°55'41"W], 1700m, 11-14.I.1983, leg. A. Newton & M. Thayer, montane rainforest, window trap (FMNH, 1♀).

DESCRIPTION: Forebody as in Fig. 133. Measurements (n=3): HW = 0.50 (0.47-0.53); TW = 0.47 (0.42-0.50); PW = 0.46 (0.43-0.48); SW = 0.54 (0.50-0.57); MW = 0.68 (0.66-0.69); AW = 0.56 (0.52-0.60); HL = 0.36 (0.34-0.38); EL = 0.12 (0.12-0.12); FL = 0.10 (0.09-0.10); TL = 0.12 (0.11-0.14); PL = 0.42 (0.40-0.44); SL = 0.68 (0.64-0.71); SC = 0.67 (0.62-0.70); FB = 1.52 (1.44-1.59); BL = 2.65 (2.61-2.68) mm. Body 'unicoloured'. Head and pronotum dark brown, only supraantennal prominences and (sometimes) posterior half of pronotal midline a tiny bit lighter. Elytra and abdomen medium to dark brown (outer half of elytra and posterior half of abdominal tergites perhaps lighter). Legs, mouthparts and antennae not differing from rest of body in colouration, medium to dark brown. Pubescence rather short and sparse everywhere, no difference between body parts.

Head and pronotum. Mid-antennal articles moderately elongate (antennomere 6 length:width = 0.060:0.050 mm). Clypeus (Fig. 123) trapezoid, ratio of longitudinal distance of supraantennal prominence tip from eyefront to the same from clypeal front = 0.51-0.57. Infraocular ridge (Fig. 125) fine, not continuing behind posterior edge of eye. Temple broadly rounded, more strongly posteriorly, almost straight anteriorly. Pronotum (Fig. 123) with maximum width 1.47x base width, sides rounded anteriorly, straight or even a little convex in posterior half, anterior angles appear very obtuse, rounded (in dorsal view). Head with only supraantennal ridges shiny and unpunctured. Sometimes with a small shiny spot in middle of vertex. Posterior half of pronotal midline strongly elevated, shiny, unpunctured. Pronotal sides rather even, without impression anteriad middle. Head with about 18 'longitudinal' puncture lines, pronotum with 16-18 'longitudinal' puncture lines, head punctation a tiny bit loosened on mid-vertex, pronotum with somewhat larger punctures than those on head.

Elytra and abdomen. Elytra (Fig. 124) slightly dilating posteriorly, behind scutellum very shallowly impressed. Medially serrate fringe absent on hind margin of tergite VII. Elytral punctation not umbilicate, punctures are similar in size to those on

head, interspaces about 1/3-1/5 of puncture diameters. Bases of tergites (posterior to basal ridges) with scabrous microsculpture, surface of tergites uneven with indistinct (tiny) punctures. Aedeagus as in Fig. 144.

ETYMOLOGY: The species is named after Dr. Margaret K. Thayer, curator of Staphylinidae in Field Museum of Natural History (Chicago) and collector of the type series.

COMPARATIVE NOTES: This is a species of very characteristic look and is also one of the four species that miss the medially serrate fringe on the hind margin of tergite VII. The clypeus is punctured the same way as the rest of the dorsal surface of the head, unique amongst all the named species. The head is round and dorsally convex, its surface and that of the pronotum is almost totally occupied by the punctures, therefore the appearance is very dull.

DISTRIBUTION: The species is so far known from a smaller set of specimens from Peru (Huánuco Dept.).

BIONOMICS: Collected by window trap in montane rainforest and cloud forest.

Parosus unicoloratus sp. nov. Figs 19-21, 29, 126-128, 134, 145

TYPE MATERIAL: HOLOTYPE (♂), "BRAZIL, Est. Biol. Boracea [23°38'S, 45°52'W], Salesopolis, SP [= Estado de São Paulo], XII-17-26-1969, [leg.] J. M. & B. A. Campbell" (CNCI). – PARATYPE (1), BRAZIL, Estado de São Paulo, Salesopolis, Estação Biológica de Boracéia, 17-26.XII.1969, leg. J. M. & B. A. Campbell (MHNG, 1♀).

DESCRIPTION: Forebody as in Fig. 134. Measurements (n=2): HW = 0.91 (0.90-0.91); TW = 0.91 (0.89-0.93); PW = 0.82 (0.80-0.83); SW = 0.79 (0.77-0.81); MW = 0.96 (0.95-0.96); AW = 0.78 (0.76-0.80); HL = 0.72 (0.71-0.72); EL = 0.16 (0.15-0.16); FL = 0.13 (0.12-0.13); TL = 0.31 (0.30-0.32); PL = 0.57 (0.56-0.58); SL = 0.92 (0.91-0.93); SC = 0.91 (0.90-0.91); FB = 2.39 (2.35-2.43); BL = 4.34 (4.27-4.41) mm. Body 'unicoloured'. Head, pronotum and elytra reddish medium brown (clypeal region, supraantennal prominences, pronotum and the shoulder area appear somewhat lighter), mediad supraantennal prominences with two little darker spots. Infraocular ridges dark brown. Abdomen medium to light brown, posterior margins of tergites lighter, yellowish. Legs, mouthparts and antennae medium brown. Pubescence short and medium dense, on abdomen much longer and somewhat more sparse.

Head and pronotum. Mid-antennal articles very slightly elongate (antennomere 6 length:width = 0.088:0.082 mm). Clypeus (Fig. 126) trapezoid, ratio of longitudinal distance of supraantennal prominence tip from eyefront to the same from clypeal front = 0.50-0.54. Infraocular ridge (Fig. 128) strong, continuing in an anteriorly strong but posteriorly vanishing keel long behind posterior edge of eye. Temple staying almost straight (slightly dilating) long behind eye, but curving inwards at posterior 1/3-1/4, occasionally rather angled, eye strongly bulging. Pronotum (Fig. 126) with maximum width 1.71-1.76x base width, sides curved all the way, most strongly anteriorly, posteriorly only slightly, anterior angles sharp. Clypeus and supraantennal ridges almost unpunctate (only a few small punctures), shiny. Frontoclypeal impression only slightly visible, apparent as a fine arcuate line between unpunctate clypeus and punctate vertex. Vertex a little elevated in anterior half of midline, apparent as a shinier

spot with confluent puncture interspaces. Middle of vertex posteriorly slightly impressed. Posterior part of pronotal midline as an elevated and shiny stripe. An area anterior to and two longitudinal stripes along the posterior midline impressed, with more sparse punctation mixed with scabrous microsculpture in them. Pronotal sides with two slight oblique depressions around middle. Head with 32-34 'longitudinal' puncture lines, pronotum with 22-24 'longitudinal' puncture lines, from anterior vertex to middle a small area loosely punctured.

Elytra and abdomen. Elytra (Fig. 127) slightly dilating posteriorly, with two small, elongate impressions behind scutellum and anterior half of elytral disc also with extremely gentle oblique depressions. Medially serrate fringe (Fig. 29) present on hind margin of tergite VII. Punctation similarly sized on head, pronotum and elytra, but elytral punctation not umbilicate, interspaces about 1/3-1/2 of puncture diameters. Bases of tergites (posterior to basal ridges) very finely microsculptured (transversal coriaceous), segments with very fine, scattered punctation. Aedeagus as in Fig. 145.

ETYMOLOGY: The name refers to the uniformly (light) coloured body of the known specimens.

COMPARATIVE NOTES: Of the similarly large 'unicoloured' species (*P. longicornis*, *P. major*, *P. gigantulus*), this one is easily distinguished by the lighter (reddish-brownish) body colour. It has moderately elongate antennae, a rather flat head with slight depression at the vertex. Contrary to the most similar *P. gigantulus*, it has much finer punctation on the head and pronotum and a brownish body colour with lighter shoulders.

DISTRIBUTION: The species is known from one locality in Brazil (Estado de São Paulo), and is probably inhabitant of atlantic forest remnants.

BIONOMICS: Unknown.

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